Panasonic

Model No.
TH-50PH30E

Operating Instructions
High Definition Plasma Display

HDMI

English

Please read these instructions before operating your set and retain them for future reference.

TQB0E2108U

Dear Panasonic Customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new Plasma Display.
To obtain maximum benefit from your set, please read these Instructions before making any adjustments, and retain them for future reference.
Retain your purchase receipt also, and note down the model number and serial number of your set in the space provided on the rear cover of these instructions.
Visit our Panasonic Web Site http://panasonic.net

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Note:
Do not allow a still picture to be displayed for an extended period, as this can cause a permanent image retention to remain on the Plasma Display.
Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode.

Important Safety Notice

WARNING

1) **To prevent damage which may result in fire or shock hazard, do not expose this appliance to dripping or splashing.**
   Do not place containers with water (flower vase, cups, cosmetics, etc.) above the set. (including on shelves above, etc.)
   No naked flame sources, such as lighted candles, should be placed on / above the set.
2) To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
3) Do not remove the earthing pin on the power plug. This apparatus is equipped with a three pin earthing-type power plug. This plug will only fit an earthing-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician.
   Do not defeat the purpose of the earthing plug.
4) To prevent electric shock, ensure the earthing pin on the AC cord power plug is securely connected.

CAUTION

This appliance is intended for use in environments which are relatively free of electromagnetic fields.
Using this appliance near sources of strong electromagnetic fields or where electrical noise may overlap with the input signals could cause the picture and sound to wobble or cause interference such as noise to appear.
To avoid the possibility of harm to this appliance, keep it away from sources of strong electromagnetic fields.

IMPORTANT: THE MOULDED PLUG

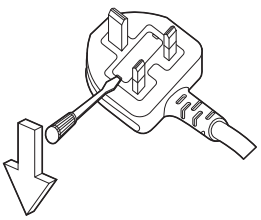
FOR YOUR SAFETY, PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This display is supplied with a moulded three pin mains plug for your safety and convenience. A 10 amp fuse is fitted in this plug. Shall the fuse need to be replaced, please ensure that the replacement fuse has a rating of 10 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover, you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic dealer.

Do not cut off the mains plug.
Do not use any other type of mains lead except the one supplied with this display.
The supplied mains lead and moulded plug are designed to be used with this display to avoid interference and for your safety.
If the socket outlet in your home is not suitable, get it changed by a qualified electrician.
If the plug or mains lead becomes damaged, purchase a replacement from an authorized dealer.



WARNING : — THIS DISPLAY MUST BE EARTHED.

How to replace the fuse. Open the fuse compartment with a screwdriver and replace the fuse.

Safety Precautions

WARNING

■ Setup

<u>This Plasma Display is for use only with the following optional accessories.</u> Use with any other type of optional accessories may cause instability which could result in the possibility of injury.

(All of the following accessories are manufactured by Panasonic Corporation.)

- Speakers TY-SP50P8W-K
- Pedestal TY-ST20-K
- Mobile stand TY-ST58PF20
- Wall-hanging bracket (vertical) TY-WK42PV20
- Wall-hanging bracket (angled) TY-WK42PR20
- Ceiling-hanging bracket TY-CE42PS20
- Touch Panel TY-TP50P10S

Always be sure to ask a qualified technician to carry out set-up.

Small parts can present choking hazard if accidentally swallowed. Keep small parts away from young children. Discard unneeded small parts and other objects, including packaging materials and plastic bags/sheets to prevent them from being played with by young children, creating the potential risk of suffocation.

Do not place the Plasma Display on sloped or unstable surfaces, and ensure that the Plasma Display does not hang over the edge of the base.

- The Plasma Display may fall off or tip over.

Do not place any objects on top of the Plasma Display.

- If water is spills onto the Plasma Display or foreign objects get inside it, a short-circuit may occur which could result in fire or electric shock. If any foreign objects get inside the Plasma Display, please consult your local Panasonic dealer.

Transport only in upright position!

- Transporting the unit with its display panel facing upright or downward may cause damage to the internal circuitry.

Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, table cloths and curtains.

For sufficient ventilation;
If using the pedestal (optional accessory), leave a space of 10 cm or more at the top, left and right, and 7 cm or more at the rear, and also keep the space between the bottom of the display and the floor surface.
If using some other setting-up method, follow the manual of it. (If there is no specific indication of installation dimension in the installation manual, leave a space of 10 cm or more at the top, bottom, left and right, and 7 cm or more at the rear.)

When installing the Plasma Display vertically;
Turn up the power switch for the upward direction when you install the Plasma Display vertically.
And set “Display orientation” to “Portrait” in Setup menu. (see page 33)

■ When using the Plasma Display

The Plasma Display is designed to operate on 220 - 240 V AC, 50/60 Hz.

Do not cover the ventilation holes.
- Doing so may cause the Plasma Display to overheat, which can cause fire or damage to the Plasma Display.

Do not stick any foreign objects into the Plasma Display.
- Do not insert any metal or flammable objects into the ventilations holes or drop them onto the Plasma Display, as doing so can cause fire or electric shock.

Do not remove the cover or modify it in any way.
- High voltages which can cause severe electric shocks are present inside the Plasma Display. For any inspection, adjustment and repair work, please contact your local Panasonic dealer.

Ensure that the mains plug is easily accessible.

An apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earthing connection.

Do not use any power supply cord other than that provided with this unit.
- Doing so may cause fire or electric shocks.

Securely insert the power supply plug as far as it will go.
- If the plug is not fully inserted, heat may be generated which could cause fire. If the plug is damaged or the wall socket is loose, they shall not be used.

Do not handle the power supply plug with wet hands.
- Doing so may cause electric shocks.

Do not do anything that may damage the power cable. When disconnecting the power cable, pull on the plug body, not the cable.
- Do not damage the cable, make any modifications to it, place heavy objects on top of it, heat it, place it near any hot objects, twist it, bend it excessively or pull it. To do so may cause fire and electric shock. If the power cable is damaged, have it repaired at your local Panasonic dealer.

If the Plasma Display is not going to be used for any prolonged length of time, unplug the power supply plug from the wall outlet.

To prevent the spread of fire, keep candles or other open flames away from this product at all times.

■ If problems occur during use

If a problem occurs (such as no picture or no sound), or if smoke or an abnormal odour starts to come out from the Plasma Display, immediately unplug the power supply plug from the wall outlet.
- If you continue to use the Plasma Display in this condition, fire or electric shock could result. After checking that the smoke has stopped, contact your local Panasonic dealer so that the necessary repairs can be made. Repairing the Plasma Display yourself is extremely dangerous, and shall never be done.

If water or foreign objects get inside the Plasma Display, if the Plasma Display is dropped, or if the cabinet becomes damages, disconnect the power supply plug immediately.
- A short circuit may occur, which could cause fire. Contact your local Panasonic dealer for any repairs that need to be made.

⚠ CAUTION

■ When using the Plasma Display

Do not bring your hands, face or objects close to the ventilation holes of the Plasma Display.
- Heated air comes out from the ventilation holes at the top of Plasma Display will be hot. Do not bring your hands or face, or objects which cannot withstand heat, close to this port, otherwise burns or deformation could result.

Be sure to disconnect all cables before moving the Plasma Display.
- If the Plasma Display is moved while some of the cables are still connected, the cables may become damaged, and fire or electric shock could result.

Disconnect the power supply plug from the wall socket as a safety precaution before carrying out any cleaning.
- Electric shocks can result if this is not done.

Clean the power cable regularly to prevent it becoming dusty.
- If dust built up on the power cord plug, the resultant humidity can damage the insulation, which could result in fire. Pull the power cord plug out from the wall outlet and wipe the mains lead with a dry cloth.

Do not burn or breakup batteries.
- Batteries must not be exposed to excessive heat such as sunshine, fire or the like.

This Plasma Display radiates infrared rays, therefore it may affect other infrared communication equipment. Install your infrared sensor in a place away from direct or reflected light from your Plasma Display.

Cleaning and maintenance

The front of the display panel has been specially treated. Wipe the panel surface gently using only a cleaning cloth or a soft, lint-free cloth.
- If the surface is particularly dirty, wipe with a soft, lint-free cloth which has been soaked in pure water or water in which neutral detergent has been diluted 100 times, and then wipe it evenly with a dry cloth of the same type until the surface is dry.
- Do not scratch or hit the surface of the panel with fingernails or other hard objects, otherwise the surface may become damaged. Furthermore, avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the surface may be adversely affected.

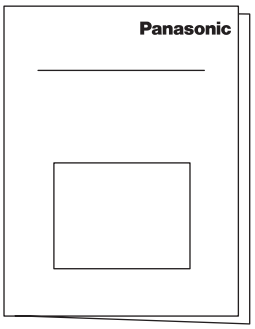
If the cabinet becomes dirty, wipe it with a soft, dry cloth.
- If the cabinet is particularly dirty, soak the cloth in water to which a small amount of neutral detergent has been added and then wring the cloth dry. Use this cloth to wipe the cabinet, and then wipe it dry with a dry cloth.
- Do not allow any detergent to come into direct contact with the surface of the Plasma Display. If water droplets get inside the unit, operating problems may result.
- Avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the cabinet surface may be adversely affected or the coating may peel off. Furthermore, do not leave it for long periods in contact with articles made from rubber or PVC.

Accessories

Accessories Supply

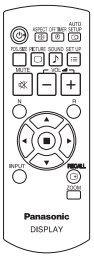
Check that you have the accessories and items shown ☑

☐ Operating Instruction book

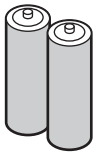


☐ CD-ROM (Operating instructions)

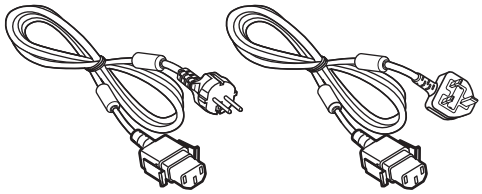
☐ Remote Control Transmitter N2QAYB000535



☐ Batteries for the Remote Control Transmitter (R6 (UM3) Size × 2)



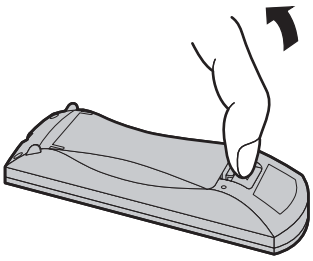
☐ Power supply cord



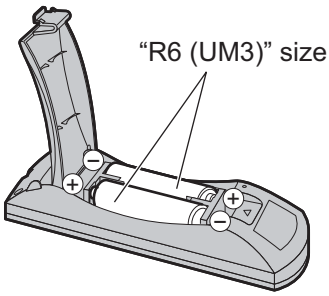
Remote Control Batteries

Requires two R6 batteries.

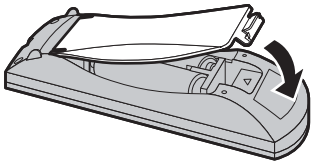
1. Pull and hold the hook, then open the battery cover.



2. Insert batteries - note correct polarity (+ and -).



3. Replace the cover.



Helpful Hint:

For frequent remote control users, replace old batteries with Alkaline batteries for longer life.

⚠ Precaution on battery use

Incorrect installation can cause battery leakage and corrosion that will damage the remote control transmitter.
Disposal of batteries should be in an environment-friendly manner.

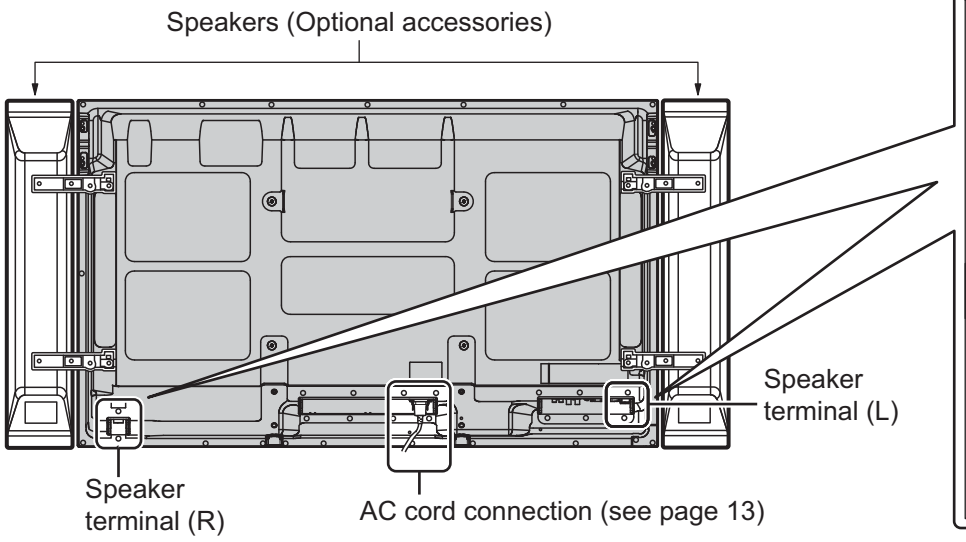
Observe the following precaution:

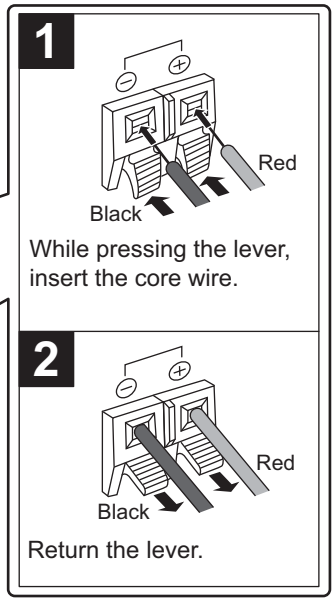
1. Batteries shall always be replaced as a pair. Always use new batteries when replacing the old set.
2. Do not combine a used battery with a new one.
3. Do not mix battery types (example: “Zinc Carbon” with “Alkaline”).
4. Do not attempt to charge, short-circuit, disassemble, heat or burn used batteries.
5. Battery replacement is necessary when remote control acts sporadically or stops operating the Plasma Display set.
6. Do not burn or breakup batteries.
   Batteries must not be exposed to excessive heat such as sunshine, fire or the like.

Connections

Speaker connection

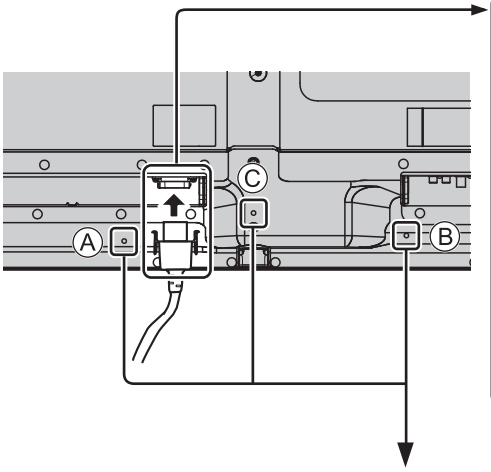
When connecting the speakers, be sure to use only the optional accessory speakers.
Refer to the speaker's Installation Manual for details on speaker installation.

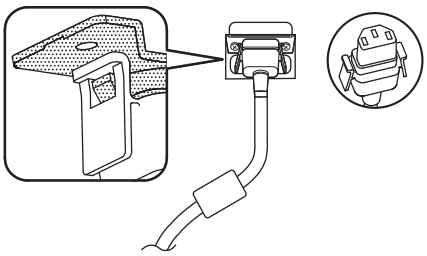




AC cord connection and fixing, cable fixing

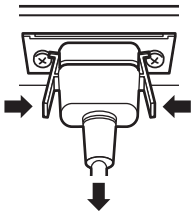
AC cord fixing





Plug the AC cord into the display unit.
Plug the AC cord until it clicks.
Note:
Make sure that the AC cord is locked on both the left and right sides.

Unplug the AC cord



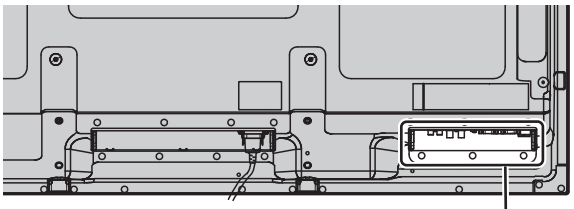
Unplug the AC cord pressing the two knobs.
Note:
When disconnecting the AC cord, be absolutely sure to disconnect the AC cord plug at the socket outlet first.

Cable fixing

There are 3 holes to fix the connection cables. As a clamper is not included with the product, provide a clamper or band as necessary.

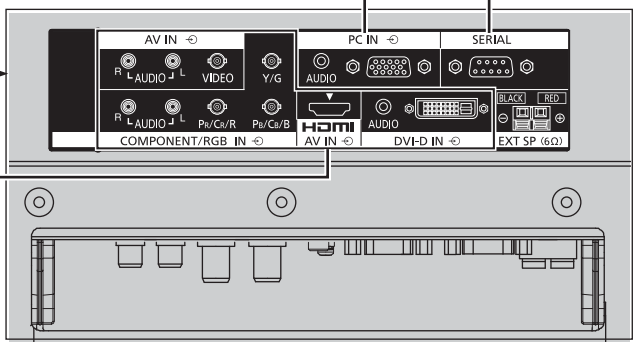
When using the Wall-hanging bracket (vertical)
Note:
When using the Wall-hanging bracket (vertical)(TY-WK42PV20), use the holes Ⓐ and Ⓑ to secure the cables. If the cables are fixed on the hole Ⓒ, the cables may be caught by the wall-hanging bracket.

Video equipment connection



PC IN: PC Input Terminal
Connect to video terminal of PC or equipment with Y, P_B(C_B) and P_R(C_R) output (see page 11).

SERIAL: Control the Plasma Display by connecting to PC (see page 12)

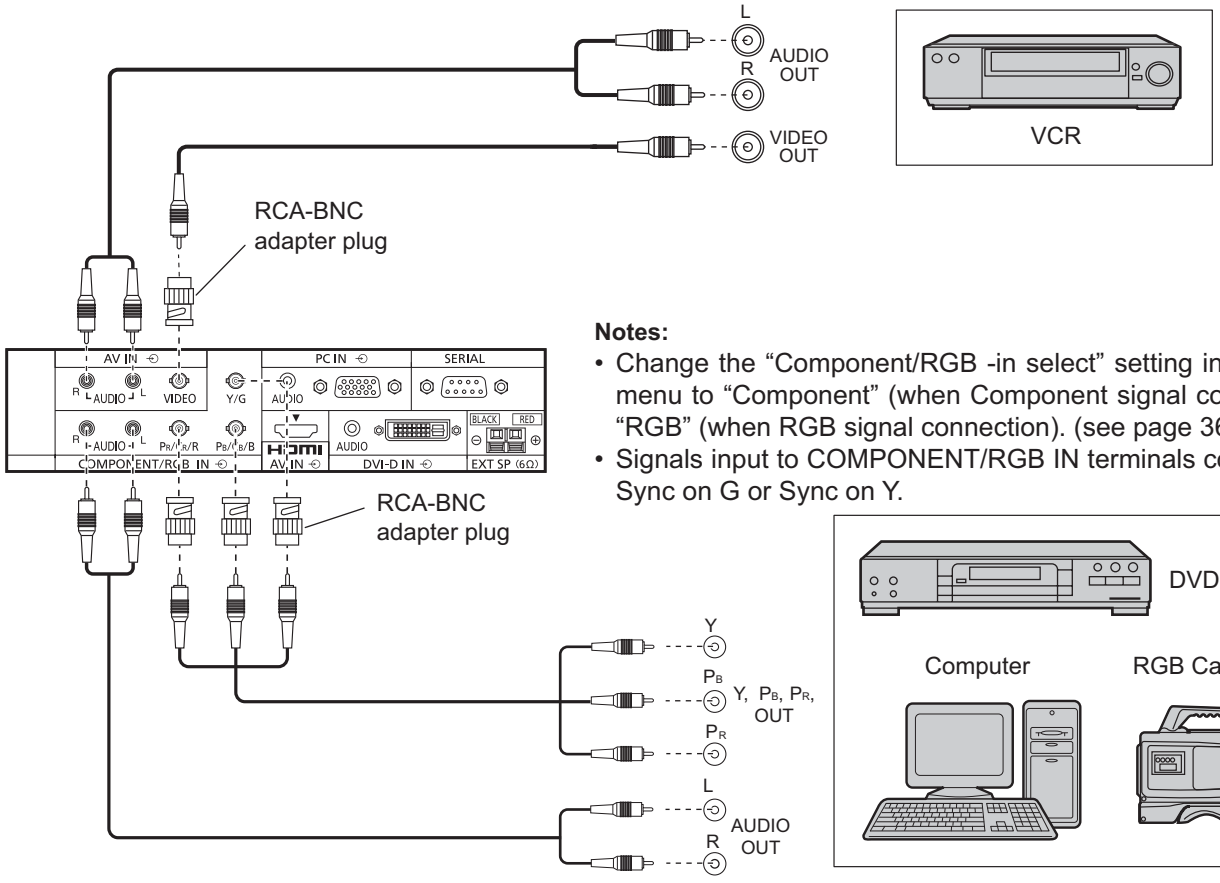


Terminals are on the bottom side of the Plasma Display.

AV IN (VIDEO): Composite Video Input Terminal (see below)
COMPONENT/RGB IN: Component/RGB Video Input Terminal (see below)
AV IN (HDMI): HDMI Input Terminal (see page 10)
DVI-D IN: DVI-D Input Terminal (see page 10)
Connect to video equipment such as VCR or DVD player.

VIDEO and COMPONENT / RGB IN connection

Note:
Additional equipment, cables and adapter plugs shown are not supplied with this set.

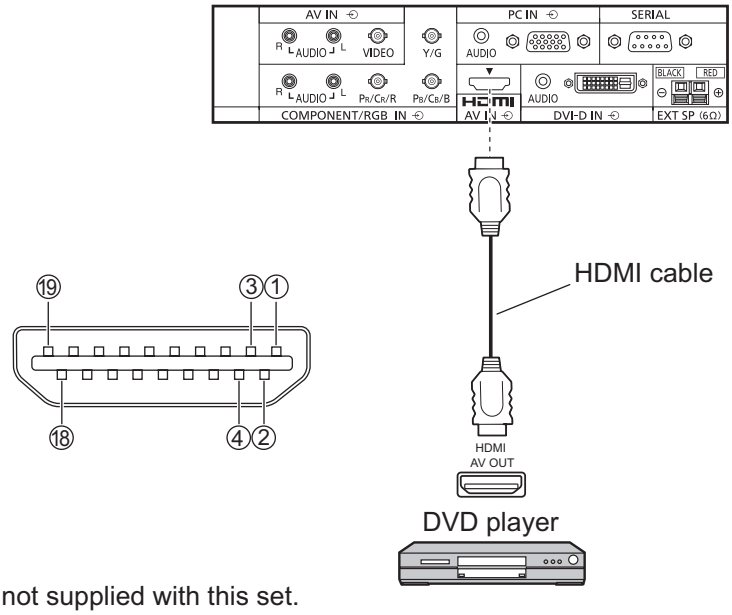


Notes:
- Change the “Component/RGB -in select” setting in the “Setup” menu to “Component” (when Component signal connection) or “RGB” (when RGB signal connection). (see page 36)
- Signals input to COMPONENT/RGB IN terminals correspond to Sync on G or Sync on Y.

HDMI connection

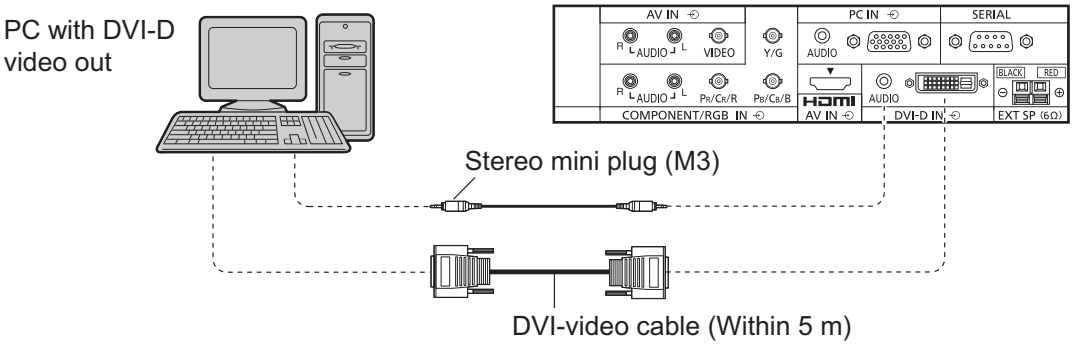
[Pin assignments and signal names]

Pin No.	Signal Name	Pin No.	Signal Name
①	T.M.D.S Data2+	⑪	T.M.D.S Clock Shield
②	T.M.D.S Data2 Shield	⑫	T.M.D.S Clock-
③	T.M.D.S Data2-	⑬	CEC
④	T.M.D.S Data1+	⑭	Reserved (N.C. on device)
⑤	T.M.D.S Data1 Shield		
⑥	T.M.D.S Data1-	⑮	SCL
⑦	T.M.D.S Data0+	⑯	SDA
⑧	T.M.D.S Data0 Shield	⑰	DDC/CEC Ground
⑨	T.M.D.S Data0-	⑱	+5V Power
⑩	T.M.D.S Clock+	⑲	Hot Plug Detect

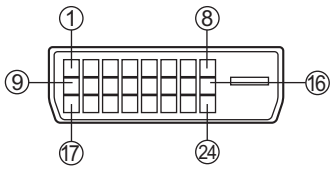


Note:
Additional equipment and HDMI cable shown are not supplied with this set.

DVI-D IN connection



DVI-D Input Connector Pin Layouts

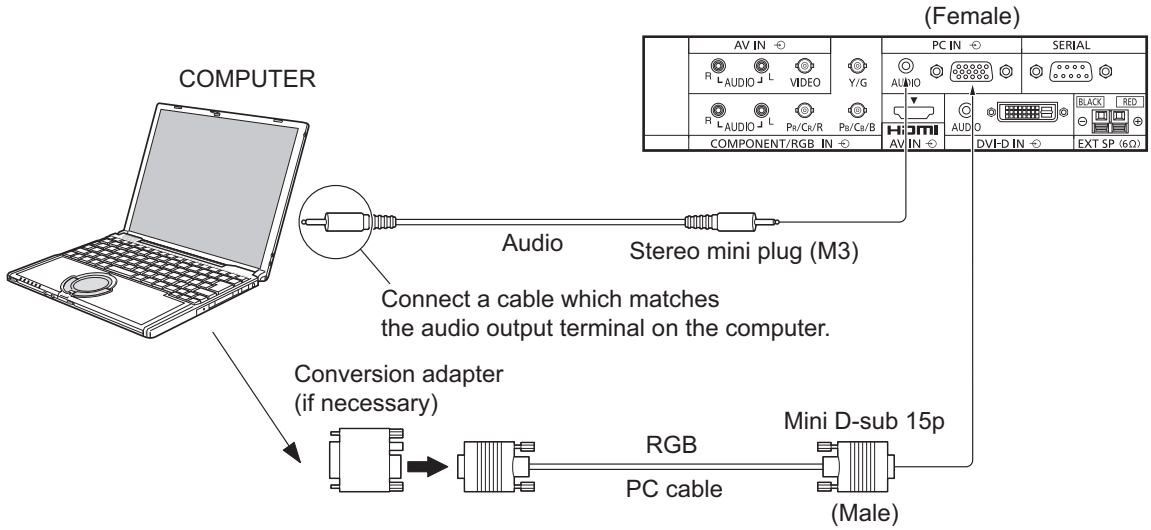


Connection port view

Pin No.	Signal Name	Pin No.	Signal Name
①	T.M.D.S. data 2-	⑬	———
②	T.M.D.S. data 2+	⑭	+5 V DC
③	T.M.D.S. data 2 shield	⑮	Ground
④	———	⑯	Hot plug detect
⑤	———	⑰	T.M.D.S. data 0-
⑥	DDC clock	⑱	T.M.D.S. data 0+
⑦	DDC data	⑲	T.M.D.S. data 0 shield
⑧	———	⑳	———
⑨	T.M.D.S. data 1-	㉑	———
⑩	T.M.D.S. data 1+	㉒	T.M.D.S. clock shield
⑪	T.M.D.S. data 1 shield	㉓	T.M.D.S. clock+
⑫	———	㉔	T.M.D.S. clock-

Notes:
- Additional equipment and cables shown are not supplied with this set.
- Use the DVI-D cable complying with the DVI standard. Image deterioration may occur depending on the length or the quality of the cable.

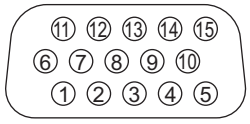
PC Input Terminals connection



Notes:

- With regard to the typical PC input signals that are described in the applicable input signals list (see page 47), adjustment values such as for the standard picture positions and sizes have already been stored in this unit. You can add up to eight PC input signal types that are not included in the list.
- Computer signals which can be input are those with a horizontal scanning frequency of 15 to 110 kHz and vertical scanning frequency of 48 to 120 Hz. (However, the image will not be displayed properly if the signals exceed 1,200 lines.)
- The display resolution is a maximum of 768 × 768 dots when the aspect mode is set to “4:3”, and 1,024 × 768 dots when the aspect mode is set to “16:9”. If the display resolution exceeds these maximums, it may not be possible to show fine detail with sufficient clarity.
- The PC input terminals are DDC2B-compatible. If the computer being connected is not DDC2B-compatible, you will need to make setting changes to the computer at the time of connection.
- Some PC models cannot be connected to the set.
- There is no need to use an adapter for computers with DOS/V compatible Mini D-sub 15P terminal.
- The computer shown in the illustration is for example purposes only.
- Additional equipment and cables shown are not supplied with this set.
- Do not set the horizontal and vertical scanning frequencies for PC signals which are above or below the specified frequency range.
- Component Input is possible with the pin 1, 2, 3 of the Mini D-sub 15P Connector.
- Change the “Component/RGB-in select” setting in the “Setup” menu to “Component” (when Component signal connection) or “RGB” (when RGB signal connection). (see page 36)

Signal Names for Mini D-sub 15P Connector

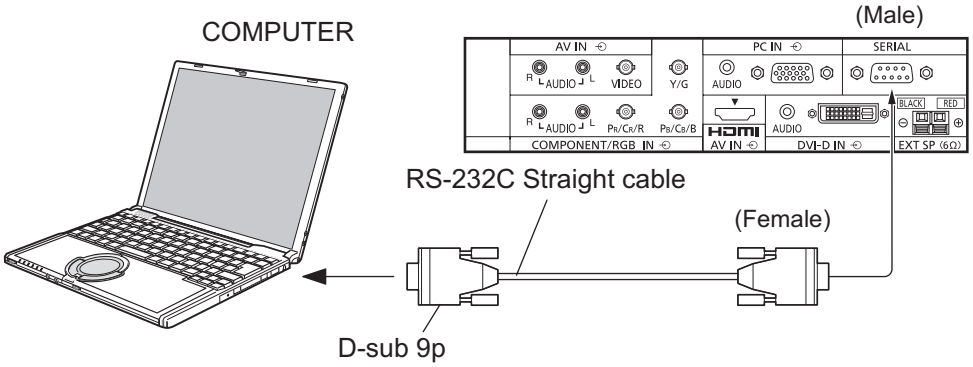


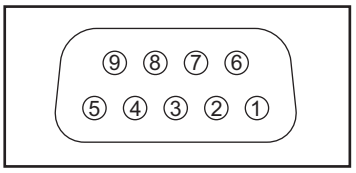
Pin Layout for PC Input Terminal

Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R (P_R/C_R)	⑥	GND (Ground)	⑪	NC (not connected)
②	G (Y)	⑦	GND (Ground)	⑫	SDA
③	B (P_B/C_B)	⑧	GND (Ground)	⑬	HD/SYNC
④	NC (not connected)	⑨	+5 V DC	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	SCL

SERIAL Terminals connection

The SERIAL terminal is used when the Plasma Display is controlled by a computer.





Pin layout for SERIAL Terminal

Notes:
- Use the RS-232C straight cable to connect the computer to the Plasma Display.
- The computer shown is for example purposes only.
- Additional equipment and cables shown are not supplied with this set.

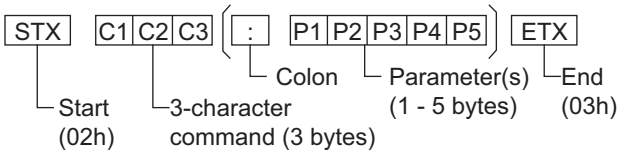
The SERIAL terminal conforms to the RS-232C interface specification, so that the Plasma Display can be controlled by a computer which is connected to this terminal.
The computer will require software which allows the sending and receiving of control data which satisfies the conditions given below. Use a computer application such as programming language software. Refer to the documentation for the computer application for details.

Communication parameters

Signal level	RS-232C compliant
Synchronization method	Asynchronous
Baud rate	9600 bps
Parity	None
Character length	8 bits
Stop bit	1 bit
Flow control	-

Basic format for control data

The transmission of control data from the computer starts with a STX signal, followed by the command, the parameters, and lastly an ETX signal in that order. If there are no parameters, then the parameter signal does not need to be sent.



Notes:
- If multiple commands are transmitted, be sure to wait for the response for the first command to come from this unit before sending the next command.
- If an incorrect command is sent by mistake, this unit will send an “ER401” command back to the computer.

Signal names for D-sub 9P connector

Pin No.	Details
②	R X D
③	T X D
⑤	GND
④ • ⑥	Non use
⑦ ⑧	(Shorted in this set)
① • ⑨	NC

These signal names are those of computer specifications.

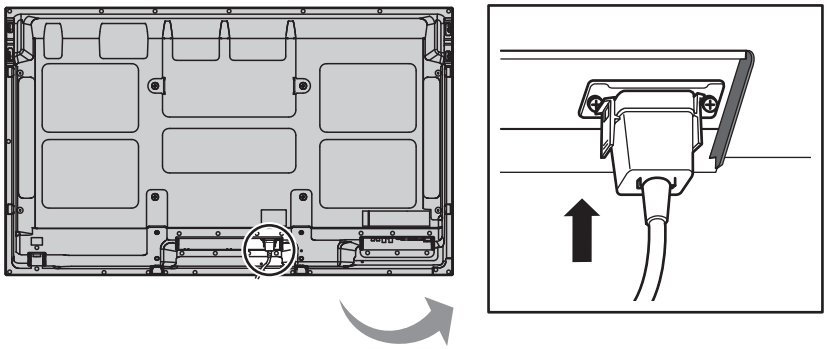
Command

Command	Parameter	Control details
PON	None	Power ON
POF	None	Power OFF
AVL	**	Volume 00 - 63
AMT	0	Audio MUTE OFF
	1	Audio MUTE ON
IMS	None	Input select (toggle)
	VD1	VIDEO input (VIDEO)
	YP1	COMPONENT/RGB IN input (COMPONENT)
	HM1	HDMI input (HDMI)
	DV1	DVI-D IN input (DVI)
	PC1	PC IN input (PC)
DAM	None	Screen mode select (toggle)
	ZOOM	Zoom1 (For Video/SD/PC signal)
	FULL	16:9
	JUST	Just (For Video/SD signal)
	NORM	4:3 (For Video/SD/PC signal)
	ZOM2	Zoom2 (For HD signal)
	ZOM3	Zoom3 (For HD signal)
	SJST	Just (For HD signal)
	SNOM	4:3 (For HD signal)
	SFUL	4:3 Full (For HD signal)
	14:9	14:9

With the power off, this display responds to PON command only.

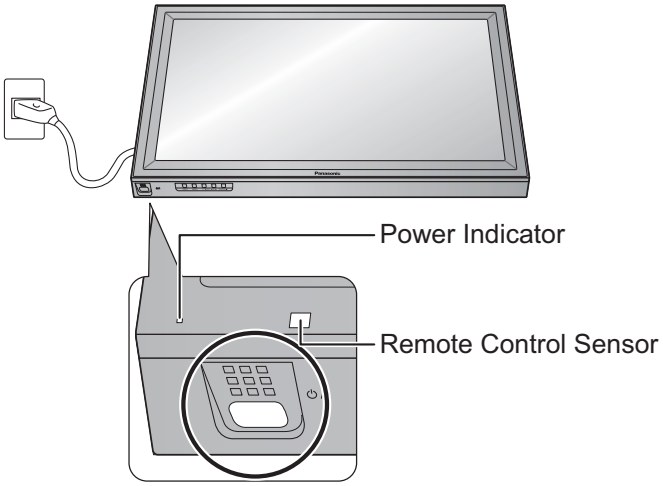
Power On / Off

Connecting the AC cord plug to the Plasma Display.



Connecting the plug to the Wall Outlet

Notes:
- Main plug types vary between countries. The power plug shown at right may, therefore, not be the type fitted to your set.
- When disconnecting the AC cord, be absolutely sure to disconnect the AC cord plug at the socket outlet first.



Press the Power switch on the Plasma Display to turn the set on: Power-On.

Power Indicator: Green

Press the ⏻ button on the remote control to turn the Plasma Display off.

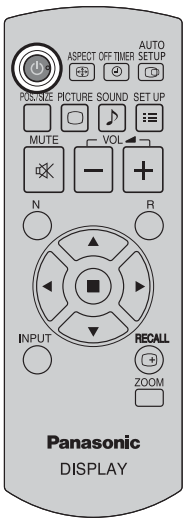
Power Indicator: Red (standby)

Press the ⏻ button on the remote control to turn the Plasma Display on.

Power Indicator: Green

Turn the power to the Plasma Display off by pressing the ⏻/I switch on the unit, when the Plasma Display is on or in standby mode.

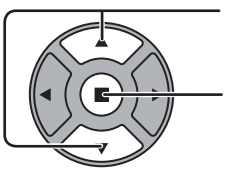
Note:
During operation of the power management function, the power indicator turns orange in the power off state.



When first switching on the unit

Following screen will be displayed when the unit is turned on for the first time.
Select the items with the remote control. Unit buttons are invalid.

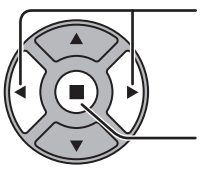
OSD Language



① Select the language.

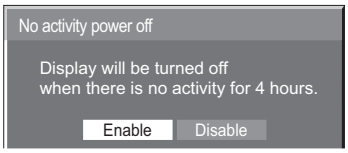
② Set.

No activity power off

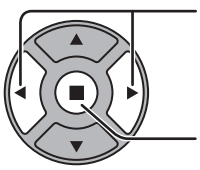


① To enable No activity power off, select “Enable”.

② Set.

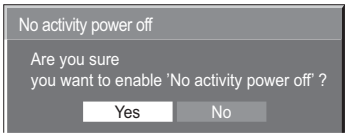


If selecting “Enable”, a confirmation window appears.

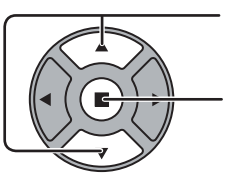


① “Select “Yes” or “No”.

② Set.

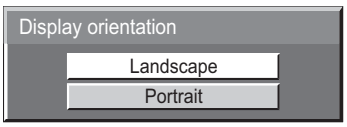


Display orientation



① For vertical installation, select “Portrait”.

② Set.



Notes:

- Once the items are set, the screens won't be displayed when switching on the unit next time.
- After the setting, the items can be changed in the following menus.
  OSD Language (see page 33)
  No activity power off (see page 31)
  Display orientation (see page 33)

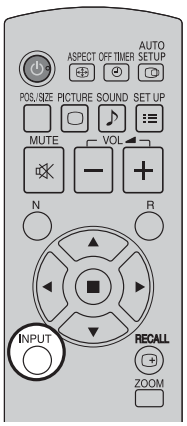
No activity power off Precautions

If “No activity power off” in Setup menu is set to “Enable”, a warning message is displayed every time the power is turned ON. (See page 31)
If you do not need this display, the settings of “Power On Message” in Options menu can relieve you of it. (See page 43)

Selecting the input signal

INPUT

Press to select the input signal to be played back from the equipment which has been connected to the Plasma Display.



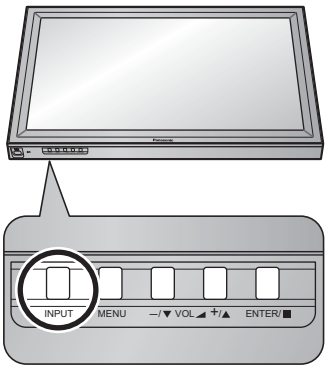
Input signals will change as follows:

→ PC → VIDEO → COMPONENT* → HDMI → DVI →

PC: PC input terminal in PC IN.
VIDEO: Video input terminal in AV IN (VIDEO).
COMPONENT*: Component or RGB input terminal in COMPONENT/RGB IN.
HDMI: HDMI input terminal in AV IN (HDMI).
DVI: DVI input terminal in DVI-D IN.
* “COMPONENT” may be displayed as “RGB” depending on the setting of “Component/RGB-in select”. (see page 36)

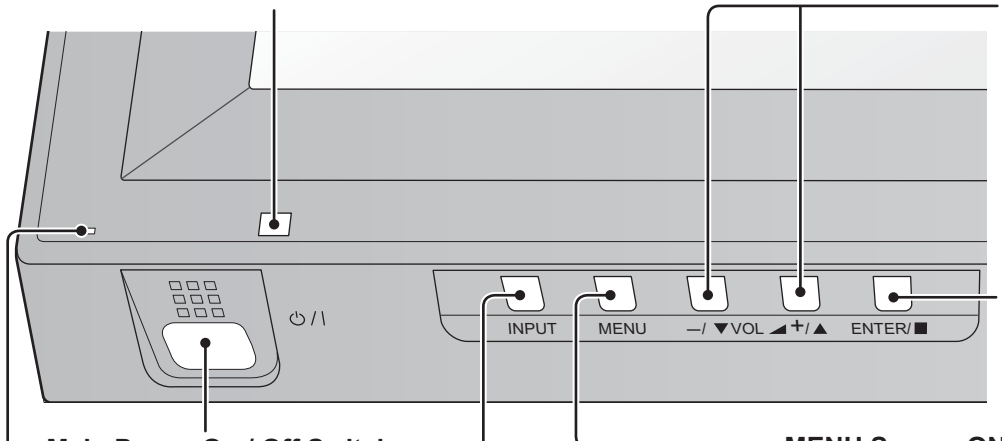
Notes:

- Selecting is also possible by pressing the INPUT button on the unit.
- Outputs the sound as set in “Audio input select” in the Options menu. (see page 44)
- Select to match the signals from the source connected to the component/RGB input terminals. (see page 36)
- Image retention (image lag) may occur on the plasma display panel when a still picture is kept on the panel for an extended period. The function that darkens the screen slightly is activated to prevent image retention (see page 45), but this function is not the perfect solution to image retention.



Basic Controls

Main Unit



Remote control sensor

Volume Adjustment
Volume Up "+" Down "–"
When the menu screen is displayed:
"+": press to move the cursor up
"–": press to move the cursor down
(see page 20)

Enter / Aspect button
(see page 18, 20)

Main Power On / Off Switch

MENU Screen ON / OFF
Each time the MENU button is pressed, the menu screen will switch. (see page 20)

→ Normal Viewing → Picture →
Sound ← Pos./Size ← Setup ←

Power Indicator
The Power Indicator will light.
- Power-OFF .... Indicator not illuminated (The unit will still consume some power as long as the power cord is still inserted into the wall outlet.)
- Standby ..... Red
- Power-ON..... Green
- PC Power management (DPMS) .....Orange (With PC input signal. See page 31)
- DVI-D Power management .....Orange (With DVI input signal. See page 31)

INPUT button
(INPUT signal selection)
(see page 15)

Remote Control Transmitter

ACTION button
Press to make selections.

ASPECT button
Press to adjust the aspect.
(see page 18)

Standby (ON / OFF) button
The Plasma Display must first be plugged into the wall outlet and turned on at the power switch (see page 13). Press this button to turn the Plasma Display On, from Standby mode. Press it again to turn the Plasma Display Off to Standby mode.

POS./SIZE button
(see page 21)

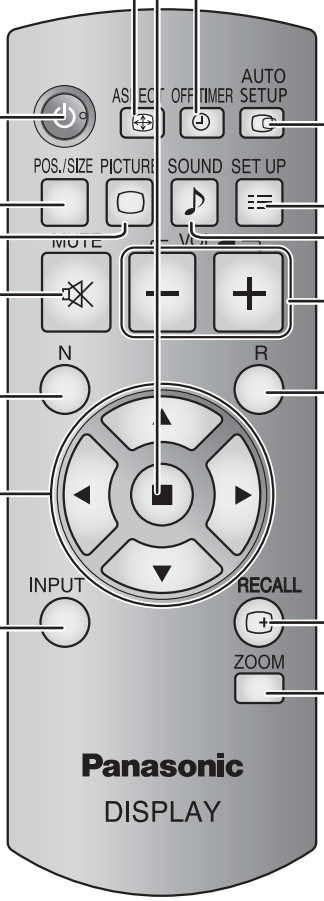
PICTURE button
(see page 23)

Sound mute On / Off
Press this button to mute the sound.
Press again to reactivate sound.
Sound is also reactivated when power is turned off or volume level is changed.

N button
(see page 22, 23, 24, 25)

POSITION buttons

INPUT button
Press to select Input signal sequentially. (see page 15)



OFF TIMER button
The Plasma Display can be preset to switch to stand-by after a fixed period. The setting changes to 30 minutes, 60 minutes, 90 minutes and 0 minutes (off timer cancelled) each time the button is pressed.

30 min → 60 min → 90 min → 0 min (Cancel) →

When three minutes remain, “Off timer 3 min” will flash.
The off timer is cancelled if a power interruption occurs.

AUTO SETUP button
Automatically adjusts the position/ size of the screen. (see page 21)

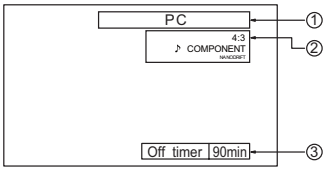
SET UP button (see page 20)

SOUND button (see page 25)

Volume Adjustment
Press the Volume Up “+” or Down “–” button to increase or decrease the sound volume level.

R button (see page 20)
Press the R button to return to previous menu screen.

RECALL button
Press the “RECALL” button to display the current system status.
① Input label
② Aspect mode (see page 18)
Audio input (see page 44)
NANODRIFT Saver operating (see page 29)
③ Off timer
The off timer indicator is displayed only when the off timer has been set.



Digital Zoom (see page 19)

ASPECT Controls

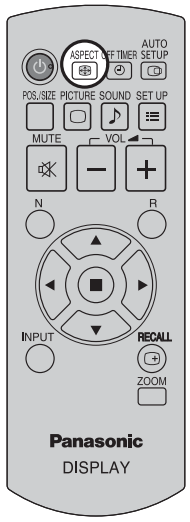
The Plasma Display will allow you to enjoy viewing the picture at its maximum size, including wide screen cinema format picture.

Note:

Be aware that if you put the display in a public place for commercial purposes or a public showing and then use the aspect mode select function to shrink or expand the picture, you may be violating the copyright under copyright law. It is prohibited to show or alter the copyrighted materials of other people for commercial purposes without the prior permission of the copyright holder.

ASPECT

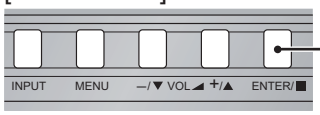
Press repeatedly to move through the aspect options:
For details about the aspect mode, please see “List of Aspect Modes” (page 46).



For VIDEO signal input:

→ 4:3 → Zoom1 → Zoom2 → Zoom3 → 16:9 → 14:9 → Just →

[from the unit]



The aspect mode changes each time the ENTER button is pressed.

For PC signal input:

→ 4:3 → Zoom → 16:9 →

For SD signal input (525 (480) / 60i • 60p, 625 (575) / 50i • 50p):

→ 4:3 → Zoom1 → Zoom2 → Zoom3 → 16:9 → 14:9 → Just →

For HD signal input [1125 (1080) / 60i • 50i • 60p • 50p • 24p • 25p • 30p • 24sF, 750 (720) / 60p • 50p]:

→ 4:3 → 4:3 Full → Zoom1 → Zoom2 →
Just ← 14:9 ← 16:9 ← Zoom3 ←

Notes:

- The aspect mode is memorized separately for each input terminal.
- Do not allow the picture to be displayed in 4:3 mode for an extended period, as this can cause a permanent image retention to remain on the Plasma Display Panel.

All Aspect mode

Set “All Aspect” to “On” in Options menu to enable the extended aspect mode (page 43). When All Aspect mode, the aspect mode of pictures is switched as follows. For details about the aspect mode, please see “List of Aspect Modes” (page 46)

For VIDEO signal input:

→ 4:3 → Zoom1 → Zoom2 → Zoom3 → 16:9 → 14:9 → Just →

For PC signal input:

→ 4:3 → Zoom → 16:9 →

For SD signal input (525 (480) / 60i • 60p, 625 (575) / 50i • 50p):

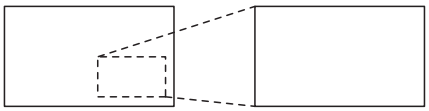
→ 4:3 → Zoom1 → Zoom2 → Zoom3 → 16:9 → 14:9 → Just →

For HD signal input [1125 (1080) / 60i • 50i • 60p • 50p • 24p • 25p • 30p • 24sF, 750 (720) / 60p • 50p]:

→ 4:3 Full → Zoom1 → Zoom2 → Zoom3 → 16:9 → 14:9 → Just1 → Just2 → 4:3 (1) → 4:3 (2) →

Digital Zoom

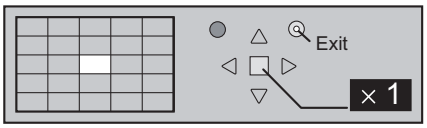
This displays an enlargement of the designated part of the displayed image.



1 Display the operation guide.

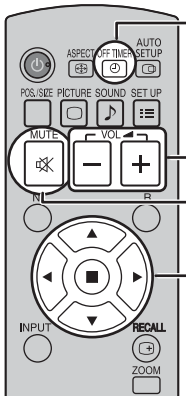
ZOOM

Press to access Digital Zoom.
The operation guide will be displayed.



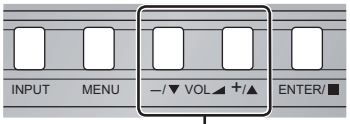
During Digital Zoom, only the following buttons can be operated.

[Remote control]



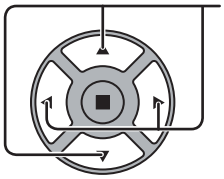
OFF TIMER button
VOL button
MUTE button
POSITION / ACTION button

[Unit]



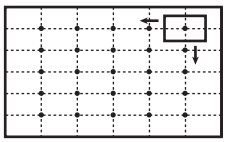
VOL button

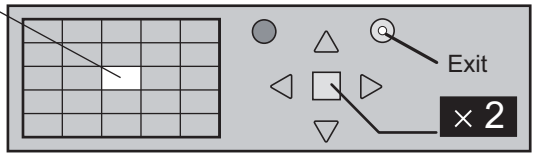
2 Select the area of the image to be enlarged.



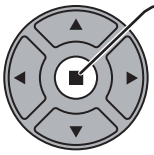
Press on the enlargement location to select.

The cursor will move.

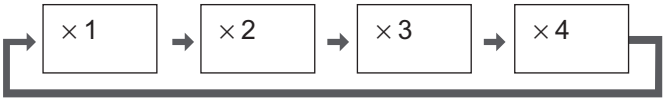




3 Select the magnification required for the enlarged display.



Each time this is pressed, the magnification factor changes.
This is shown in the image being displayed.



4 Return to normal display (quit Digital Zoom).

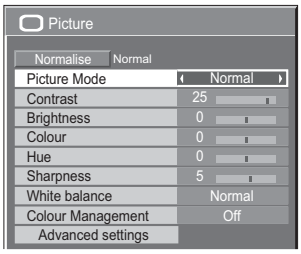
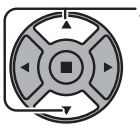
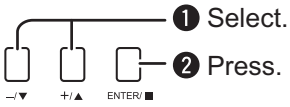
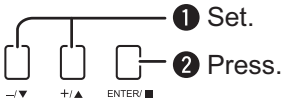
R

Press to exit from the Digital Zoom.

Notes:

- When power goes OFF (including “Off Timer” operation), Digital Zoom terminates.
- The Digital Zoom function cannot be selected while in the following operation state:
  When MULTI DISPLAY Setup is On (see page 34).
  When Screensaver (except for Negative image) is running (see page 26)
- While Digital Zoom is in operation, “Adjusting Pos./ Size” cannot be used.

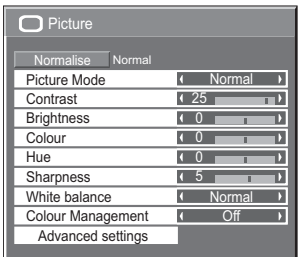
On-Screen Menu Displays

	Remote Control	Unit
1 Display the menu screen.	Press to select. (Example: Picture menu)	Press several times. MENU Each time the MENU button is pressed, the menu screen will switch. → Normal Viewing → Picture → Sound ← Pos./Size ← Setup ←
2 Select the item.  (Example: Picture menu)	 Select.	
3 Set.	Set.	
4 Exit the menu.	Press. Press R to return to the previous menu.	Press several times. MENU

Menu display list

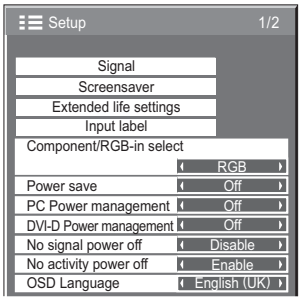
Note: Menu that cannot be adjusted is grayout. Adjustable menu changes depending on signal, input and menu setting.

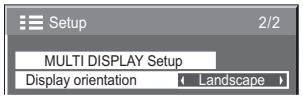
Picture menu



see page 23, 24

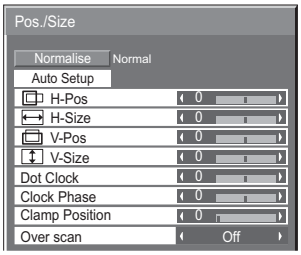
Setup menu





see page 26-40

Pos./Size menu



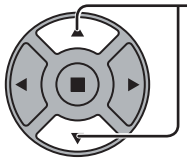
see page 21, 22

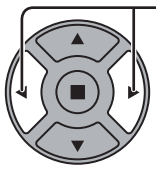
Sound menu

see page 25

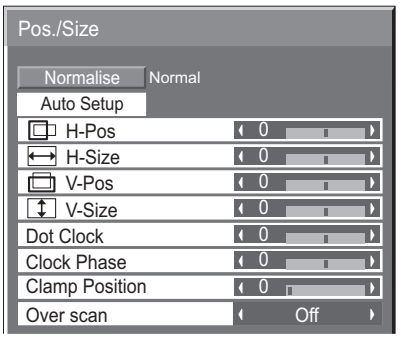
Adjusting Pos./Size

1 POS./SIZE — Press to display the Pos./Size menu.

2  Press to select the menu to adjust.

3  Press to adjust the menu.

4 POS./SIZE — Press to exit from adjust mode.



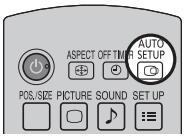
Notes:
Unadjustable items are grayed out.
Adjustable items differ depending on the input signal and the display mode.

Notes:
- Adjustment details are memorized separately for different input signal formats (Adjustments for component signals are memorized for 525 (480) / 60i · 60p, 625 (575) / 50i · 50p, 1125 (1080) / 60i · 50i · 60p · 50p · 24p · 25p · 30p · 24sF, 750 (720) / 60p · 50p each, and RGB/PC/Digital signals are memorized for each frequency.)
- If a “Cue” or “Rew” signal from a VCR or DVD player is received, the picture position will shift up or down. This picture position movement cannot be controlled by the Picture Pos./Size function.

Auto Setup When inputting a PC signal as an example, “H-Pos/V-Pos”, “H-Size/V-Size”, “Dot Clock” and “Clock Phase” are automatically corrected.
This setting is enabled under the following conditions:
- This setting is not activated during Multiple display or Digital Zoom.
- When inputting an analog signal (Component/PC):
  This setting is enabled if “Component/RGB-in Select” (see page 36) in Setup menu is “RGB”.
- When inputting a digital signal (HDMI/DVI):
  A PC format signal enables this setting.
  If other than a PC format signal, this setting is enabled with “Over scan” (see page 22) set to “Off”, and H-Size/V-Size cannot make automatic corrections.

This setting will be invalid and will not work under the following conditions:
- When VIDEO signal input
- Aspect is set to “Just”
- “Display size” in the Options menu (see page 42) is set to “On”

Using Remote Control

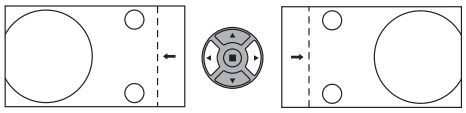


When AUTO SETUP on the remote control is pressed, “Auto Setup” will be executed.
When Auto Setup does not work, “Invalid” is displayed.

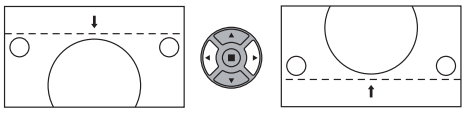
Auto mode
When the “Auto Setup“ is set to “Auto” in the Options menu (see page 43), automatic position adjustment starts:
- When the display power is turned ON.
- When the input signal is switched.

Notes:
- If the dot clock frequency of an analog signal is 108 MHz or higher, “Dot Clock” and “Clock Phase” cannot be automatically corrected.
- When digital signal input, Dot Clock and Clock Phase cannot be made.
- Auto Setup may not work when a cropped or dark image is input. In such case, switch to a bright image with borders and other objects are clearly shown, and then try auto setup again.
- Depending on the signal, out of alignment may occur after Auto Setup. Carry out fine tuning for the position/size as required.
- If Auto Setup cannot set properly for vertical frequency 60Hz XGA signal (1024×768@60Hz, 1280×768@60Hz, and 1366×768@60Hz), pre-selecting the individual signal in “XGA Mode” (see page 38) may results in correct Auto Setup.
- Auto Setup does not work well when a signal such as additional information is superimposed out of valid image period or intervals between synchronizing and image signals are short, or for image signal with tri-level synchronizing signal added.
- If Auto Setup cannot adjust correctly, select “Normalise” once and press ACTION (■), then adjust Pos./Size manually.

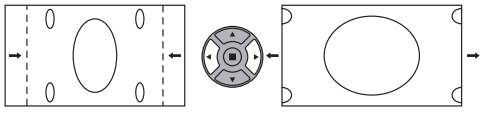
H-Pos Adjust the horizontal position.



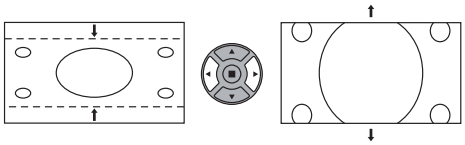
V-Pos Adjust the vertical position.



H-Size Adjust the horizontal size.



V-Size Adjust the vertical size.

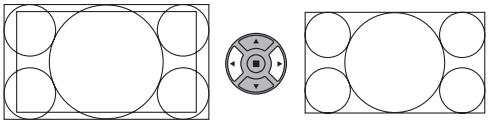


Dot Clock **(During Component/PC input signal)**
Periodic striped pattern interference (noise) may occur when a striped pattern is displayed. If this happens, adjust so that any such noise is minimized.

Clock Phase **(During Component/PC input signal)**
Eliminate the flickering and distortion.

Clamp Position **(During Component/PC input signal)**
Adjusts the clamp position when black parts of the image have no detail due to underexposure or are tinged with green.
Optimum value for Clamp Position adjustment
When black parts have no detail due to underexposure (blackout)
→ Value that causes least blackout is the optimum.
When black parts are tinged with green
→ Value that cancels the greenishness without causing blackout is the optimum.

Over scan Turn image over scan On/Off.
Configurable signals are as follows:
525i, 525p, 625i, 625p, 750/60p, 750/50p, 1125/60i, 1125/50i, 1125/24sF, 1125/25p, 1125/24p, 1125/60p, 1125/50p, 1125/30p (Component Video, RGB, DVI, HDMI)



On Off

Notes:
- When “Off” is set, “H-Size” and “V-Size” cannot be adjusted.
- When the “Display size” is set to “On” in the Options menu, this setting will be invalid. (see page 42)

Helpful Hint (N / Normalise Normalisation)

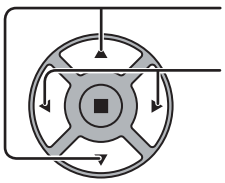
While the Pos./ Size display is active, if either the N button on the remote control is pressed at any time or the ACTION (■) button is pressed during “Normalise”, then all adjustment values are returned to the factory settings.

Picture Adjustments

1 PICTURE

Press to display the Picture menu.

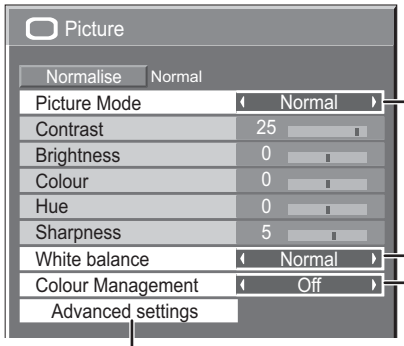
2 Select to adjust each item.



Press to select the menu to adjust.

Select the desired level by looking at the picture behind the menu.

Note:
Menu that cannot be adjusted is grayout. Adjustable menu changes depending on signal, input and menu setting.



Press "◀" or "▶" button to switch between modes.

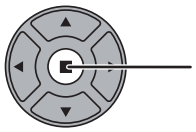
Normal ⟷ Dynamic ⟷ Cinema

Normal
For viewing in standard (evening lighting) environments.
This menu selects the normal levels of Brightness and Contrast.

Dynamic
For viewing in brighter environments.
This menu selects higher than normal levels of Brightness and Contrast.

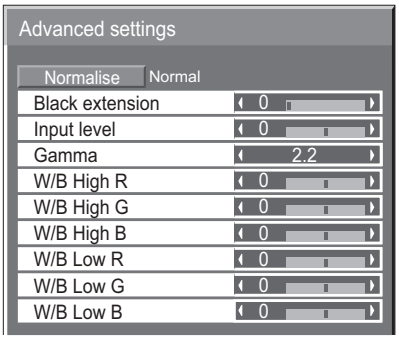
Cinema
Ideal for movies.

Note:
If you would like to change the picture and colour of the selected Picture menu to something else, adjust using the items in the Picture menu. (see next page)



Press to enter
Advanced settings .

Advanced settings
Enables fine picture adjustment at a professional level (see next page).



Press "◀" or "▶" button to switch between modes.

Normal ⟷ Cool ⟷ Warm

Colour Management On
Enables vivid colour adjustment automatically.

Helpful Hint (N / Normalise Normalisation)

While the "Picture" menu is displayed, if either the N button on the remote control is pressed at any time or the ACTION (■) button is pressed during "Normalise", then all adjustment values are returned to the factory settings.

Item	Effect		Adjustments
Contrast	◀ Less	▶ More	Selects the proper brightness and density for the room.
Brightness	◀ Darker	▶ Brighter	Adjusts for easier viewing of dark pictures such as night scenes and black hair.
Colour	◀ Less	▶ More	Adjusts colour saturation.
Hue	◀ Reddish	▶ Greenish	Adjusts for nice skin colour.
Sharpness	◀ Less	▶ More	Adjusts picture sharpness.

Notes:
- You can change the level of each function (Contrast, Brightness, Colour, Hue, Sharpness) for each Picture Mode.
- The setting details for Normal, Dynamic and Cinema respectively are memorized separately for each input terminal.
- In Contrast, there is not a noticeable change even when contrast is increased with a bright picture or reduced with a dark picture.

Advanced settings

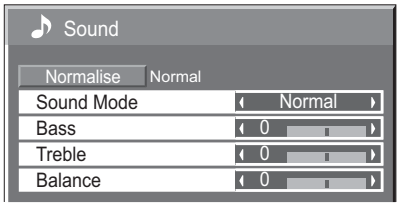
Item	Effect		Details
Black extension	◀ Less	▶ More	Adjusts the dark shades of the image in gradation.
Input level	◀ Less	▶ More	Adjustment of parts which are extremely bright and hard to see.
Gamma	◀ Down	▶ Up	S Curve ⟷ 2.0 ⟷ 2.2 ⟷ 2.6
W/B High R	◀ Less	▶ More	Adjusts the white balance for light red areas.
W/B High G	◀ Less	▶ More	Adjusts the white balance for light green areas.
W/B High B	◀ Less	▶ More	Adjusts the white balance for light blue areas.
W/B Low R	◀ Less	▶ More	Adjusts the white balance for dark red areas.
W/B Low G	◀ Less	▶ More	Adjusts the white balance for dark green areas.
W/B Low B	◀ Less	▶ More	Adjusts the white balance for dark blue areas.

Notes:
- Carry out “W/B” adjustment as follows.
  1. Adjust the white balance of the bright sections using the “W/B High R”, “W/B High G” and “W/B High B” settings.
  2. Adjust the white balance of the dark sections using the “W/B Low R”, “W/B Low G” and “W/B Low B” settings.
  3. Repeat steps **1** and **2** to adjust.
  Steps **1** and **2** affect each other’s settings, so repeat each step in turn to make the adjustment.
- The adjustment values are memorized separately for each input terminal.
- The adjustment range values should be used as an adjustment reference.

Helpful Hint (N / Normalise Normalisation)

On the remote control unit, while the “Advanced settings” menu is displayed, if either the N button is pressed at any time or the ACTION (■) button is pressed during “Normalise”, then all adjustment values are returned to the factory settings.

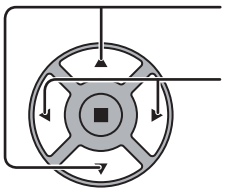
Sound Adjustment



1 SOUND

Press to display the Sound menu.

2 Select to adjust each item.



Press to select the menu to adjust.

Select the desired level by listening to the sound.

3 SOUND

Press to exit from adjust mode.

Item	Details
Sound Mode	**Normal:** Emits the original sound. **Dynamic:** Accentuates sharp sound.
Bass	Adjusts low pitch sounds.
Treble	Adjusts high pitch sounds.
Balance	Adjusts left and right volumes.

Note: Bass and Treble settings are memorized separately for each Sound Mode.

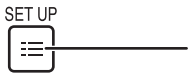
Helpful Hint (N / Normalise Normalisation)

While the “Sound” menu is displayed, if either the N button on the remote control is pressed at any time or the ACTION (■) button is pressed during “Normalise”, then all adjustment values are returned to the factory settings.

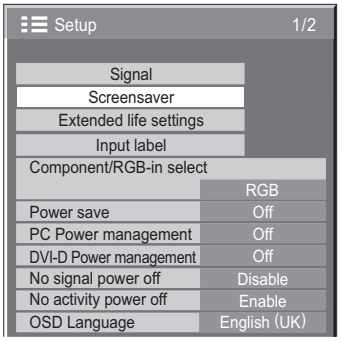
Screensaver (For preventing image retention)

Do not display a still picture, especially in 4:3 mode, for any length of time.
If the display must remain on, a Screensaver should be used.

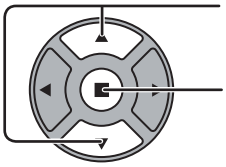
1



Press to display the Setup menu.

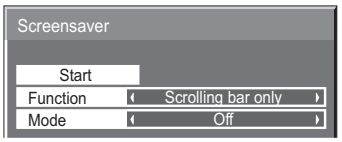


2

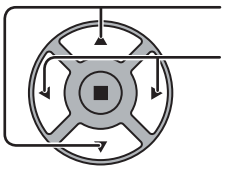


Press to select Screensaver.

Press to display Screensaver screen.



3 **Function selection**



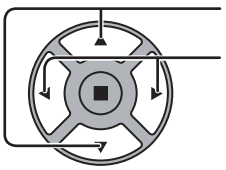
Press to select Function.

Press to select the desired function.

→Negative image ⟷ Scrolling bar only ←
→White screen ⟷ Overlay scrolling bar ←

Negative image : Negative image will be displayed on the screen.
Scrolling bar only : A white bar will scroll from left to right. The image won't be displayed.
Overlay scrolling bar : The brightness of the image will be decreased and a white bar will scroll on it.
White screen : The whole screen will be white.

4 **Mode selection**

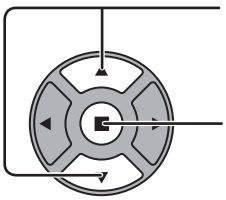


Press to select Mode.

Press to select each mode items.

Off
↕
Interval : Operates when Periodic Time and Operating Time are setup and those times arrive.
↕
Standby after SCR Saver: Operates while Screensaver duration, and display enters standby mode.
↕
On : Operates when Start is selected and the ACTION (■) button is pressed.

5 **Start setting**



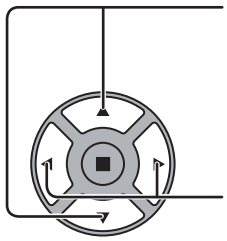
When the Mode is set to On, press to select Start.

Press to start Screensaver.
The menu screen will disappear and the Screensaver will be activated. **To stop the Screensaver under On, press the R button or any buttons on the main unit.**

Note: When the display is turned off, the Scrensaver will be deactivated.

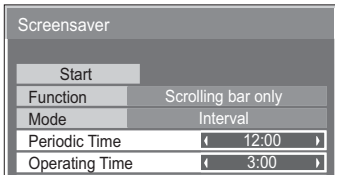
Setup of Screensaver Time

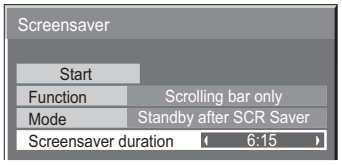
After selecting Interval or Standby after SCR Saver, the relevant Time Setup will become available for selection and the Operating Time may be set. (Time cannot be set when “Mode” is “On” or “Off”.)



Press to select Periodic Time / Operating Time
(When Interval is selected).
Press to select Screensaver duration
(When Standby after SCR Saver is selected).

Press to setup.
▶ button: Forward
◀ button: Back





Notes:

- Pressing “◀” or “▶” button once changes the Time 1 minute.
  [However, switching occurs every 15 minutes when Periodic Time is selected.]
- Pressing “◀” or “▶” button continuously changes the Time by 15 minutes.
- “Screensaver duration” of the “Standby after SCR Saver” can be set from 0:00 to 23:59. When this is set to “0:00”, “ Standby after SCR Saver” will not be activated.

Reduces screen image retention

Extended life settings

The following settings are setup to reduce image retention:

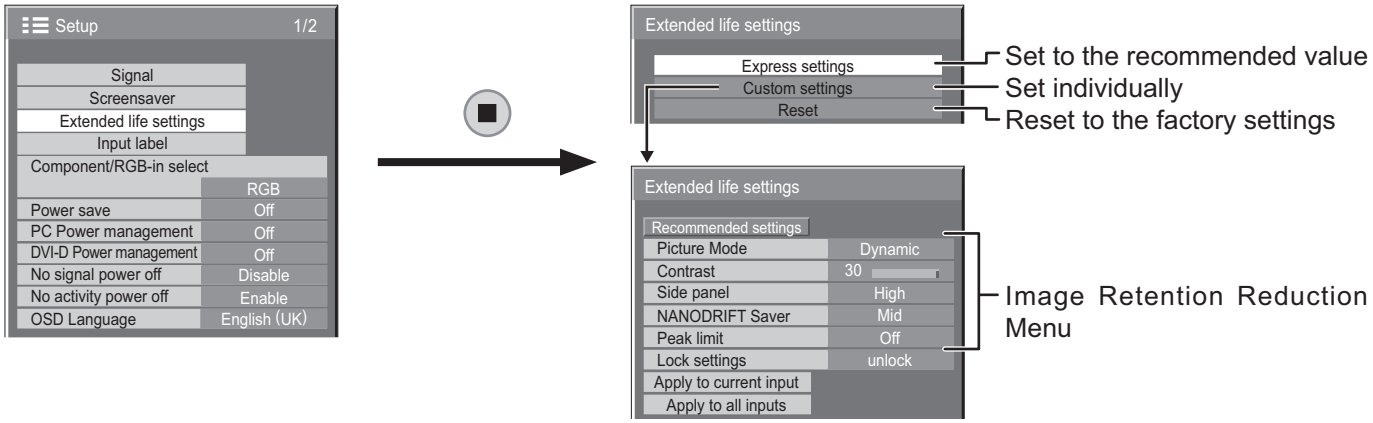


Image Retention Reduction Menu

"Extended life settings" enables you to set the following 5 menus (Image Retention Reduction Menu) as recommended values or set them individually.

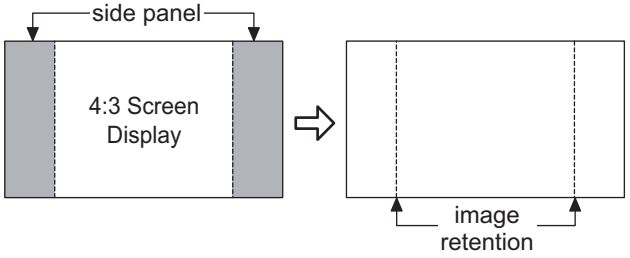
Picture Mode

Contrast

"Picture Mode" and "Contrast" are same as "Picture" menu items (see page 23). The settings of this menu will be reflected to the "Picture" menu.

Side panel

Do not display a picture in 4:3 mode for an extended period, as this can cause an image retention to remain on the side panels on either side of the display field.
To reduce the risk of such an image retention, illuminate the side panels.



This function may be applicable to the non-picture area.

Off: Darken both ends.
Low: Make it dark gray.
Mid: Make it gray.
High: Make it light gray.

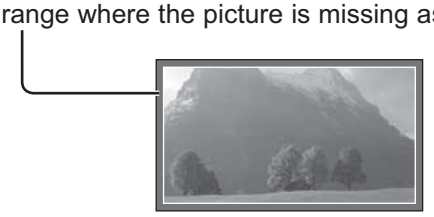
Notes:

- To reduce the occurrence of image retention, set the Side panel to High.
- The side panel may flash (alternate black/white) depending on the picture being shown on the screen. Using Cinema mode will reduce such flashing.

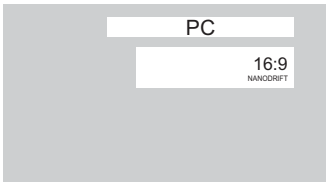
NANODRIFT Saver

Moves the display position of the screen slightly to reduce image retention on the display panel.

Low–High: NANODRIFT Saver operates. The display position of the screen moves at set time intervals. You can set the screen movement range. Some of the screen may appear to be missing as a result of this operation. If you change the value, a mask is displayed in the range where the picture is missing as a result of position movement.



When “NANODRIFT” Image Retention Reduction is operating, “NANODRIFT” is displayed.



Note:

This function does not work in the following cases.

When “MULTI DISPLAY Setup” is set to “On”

When in digital zoom mode

Peak limit

On: Suppresses image contrast (peak brightness).

Note: When a still picture is viewed for an extended time, the screen may become slightly darker. (see page 45)

Express settings

Set the “Image Retention Reduction” menu to the recommended settings.

All menus will be locked.

Picture Mode: Normal

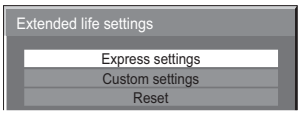
Contrast: Recommended setting for each model

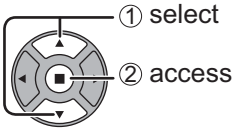
Side panel: High

NANODRIFT Saver: Mid

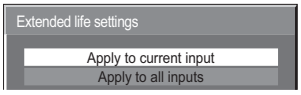
Peak limit: On

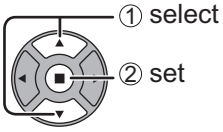
1 Select “Express settings”.



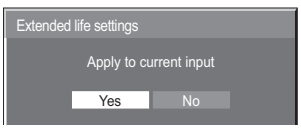


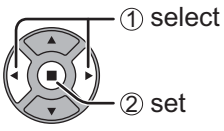
2 Select the input to apply the settings.





3 Select “Yes”.

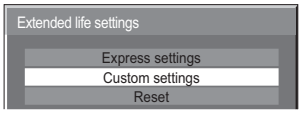


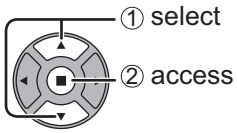


Custom settings

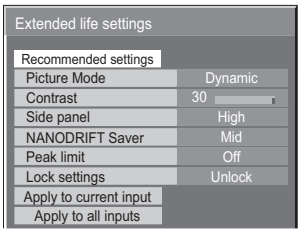
Set the individual “Image Retention Reduction” menu.

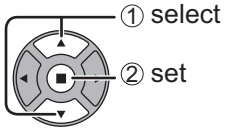
1 Select “Custom settings”.





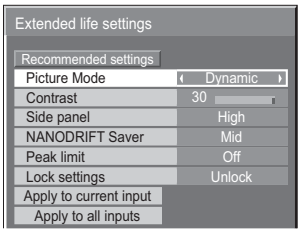
2 To set each menu to the recommended setting:
Select “Recommended settings”.

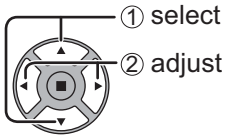




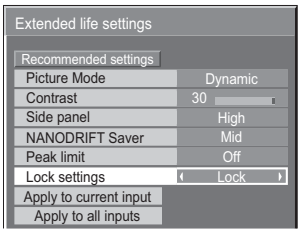
Each menu will be set as same as the “Express settings”.

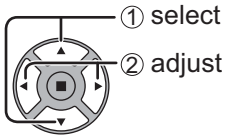
3 Set each menu.



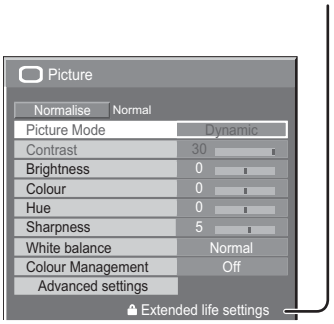


4 To lock each menu setting:
Set the “Lock settings” to “Lock”.

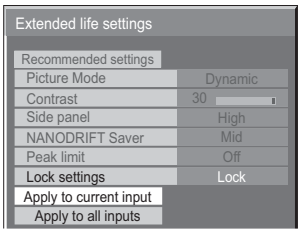


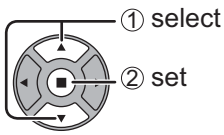


When a menu is locked, it is grayed out and cannot be set.
“Picture Mode” and “Contrast” will no longer be able to set in the “Picture” menu, and they are labeled with icon to indicate their locked status.

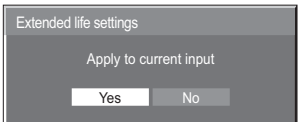


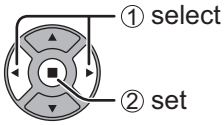
5 Select the input to apply the settings.





6 Select “Yes”.

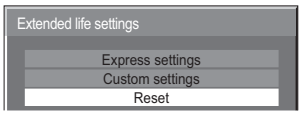


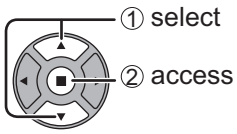


Reset

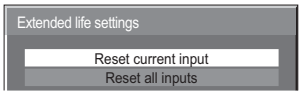
Reset the “Image Retention Reduction” menu to the factory settings. Each menu will be unlocked.

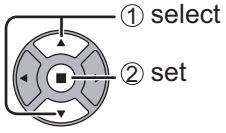
1 Select “Reset”.



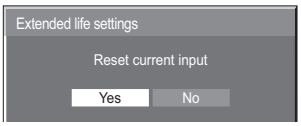


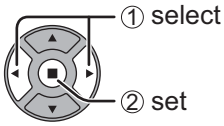
2 Select the input to reset the settings.





3 Select “Yes”.





Reduces power consumption

• Power save:

When this function is turned On, luminous level of the Plasma Display is suppressed, so power consumption is reduced.

• PC Power management:

When this function is set to On, it operates under the following conditions to turn the power on or off automatically.
When no pictures (HD/VD sync signals) are detected for 30 or so seconds during PC signal input:
→ Power is turned off (standby); the power indicator lights up orange.
When pictures (HD/VD sync signals) are subsequently detected:
→ Power is turned on; the power indicator lights up green.
Notes:
•This function operates only during PC signal input.
•This function is effective when “Sync” is set to “Auto”, “Component / RGB-in select” is set to “RGB” and during normal viewing (one picture screen).

• DVI-D Power management:

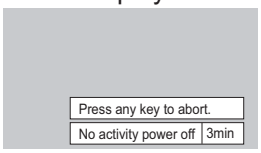
When this function is set to On, it operates under the following conditions to turn the power on or off automatically.
When no pictures (sync signal) are detected for 30 or so seconds during DVI signal input:
→ Power is turned off (standby); the power indicator lights up orange.
When pictures (sync signal) are subsequently detected:
→ Power is turned on; the power indicator lights up green.
Note:
This function operates only during DVI signal input.

• No signal power off:

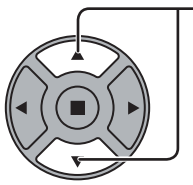
Equipment power supply is turned Off when there is no signal.
When this is set to “Enable”, the power supply of the unit goes Off 10 minutes after the input signals stop.
Note:
This function is effective during normal viewing (one picture screen).

• No activity power off:

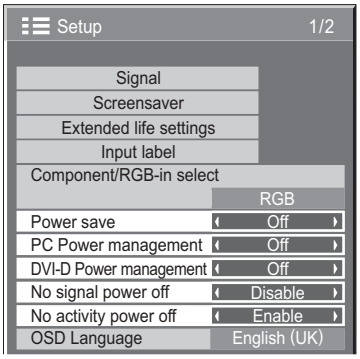
When this function is set to “Enable”, the power is turned off (standby) automatically when there is no operation of the Plasma Display for 4 hours.
Starting from 3 minutes before the turn off, the remaining time will be displayed.

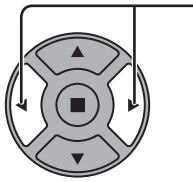


When the power is turned off due to this function, a message “Last turn off due to ’No activity power off’.” is displayed next time the power is turned on.
Note:
During the screensaver is running, this function is disabled.

1 

Press to select
“Power save”
“PC Power management”
“DVI-D Power management”
“No signal power off”
“No activity power off”.



2 

Press to select “On (Enable)” or “Off (Disable)”.

On (Enable) ⟷ Off (Disable)

3

Press to exit from Setup.

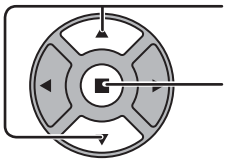
Customizing the Input labels

This function can change the label of the Input signal to be displayed. (see page 15)

1 SET UP

Press to display the Setup menu.

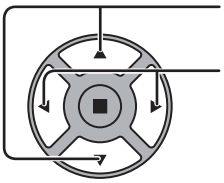
2



Press to select Input label.

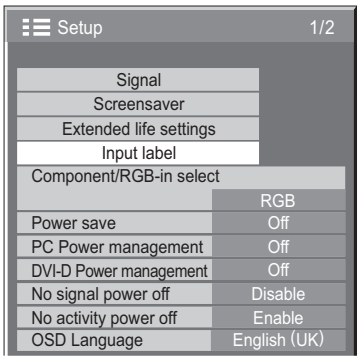
Press to display the Input label screen.

3



Press to select image input.

Press to change input label.



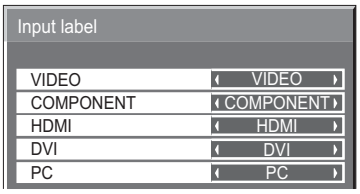


Image input	Input label
[VIDEO]	VIDEO / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
[COMPONENT]*	COMPONENT / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
[HDMI]	HDMI / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
[DVI]	DVI / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
[PC]	PC / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)

(Skip): The INPUT button press will skip its input.

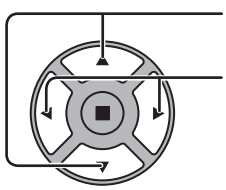
* “COMPONENT” may be displayed as “RGB” depending on the setting of “Component/RGB-in select”. (see page 36)

Selecting the On-Screen Menu Language

1 SET UP

Press to display the Setup menu.

2

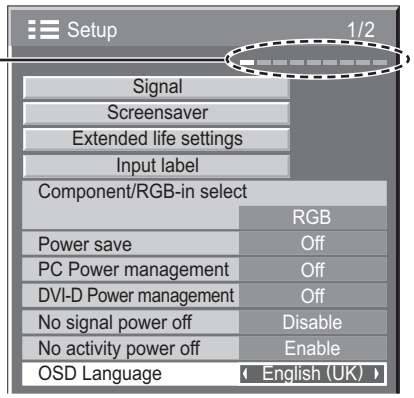


Press to select the OSD Language.

Press to select your preferred language.

■ Selectable languages

English(UK)
Deutsch
Français
Italiano
Español
ENGLISH(US)
中文.....(Chinese)
日本語.....(Japanese)
Русский.....(Russian)



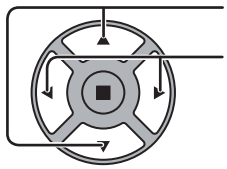
Display orientation

Sets the fan control, panel drive control, and the display style of on-screen menu for vertical installation.

1 SET UP

Press to display the Setup menu.

2

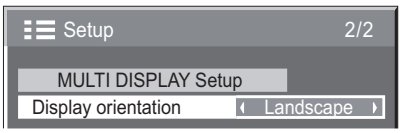


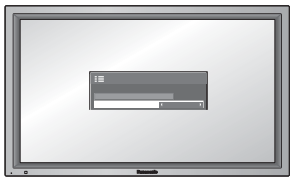
Press to select Display orientation.

Press to select “Landscape” or “Portrait”.

3 SET UP

Press to exit from adjust mode





Landscape

Fan control and panel drive control for horizontal installation.

Portrait

Fan control and panel drive control for vertical installation. On-screen menu will be rotated 90 degrees counterclockwise to be suitable for the setting.

Notes:

- Turn up the power switch for the upward direction when you set Display vertically.
- When you change this setting, fan control and panel drive control will be switched as the power is turned on next time.

Setup for MULTI DISPLAY

By lining up Plasma Displays in groups, for example, as illustrated below, an enlarged picture may be displayed across all screens.
For this mode of operation, each plasma display has to be set up with a Display number to determine its location.

(Example)

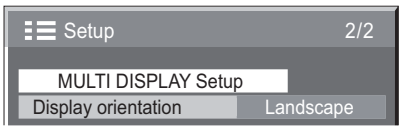
group of 4 (2 × 2) group of 9 (3 × 3) group of 16 (4 × 4) group of 25 (5 × 5)

How to Setup MULTI DISPLAY

1 SET UP — Press to display the Setup menu.

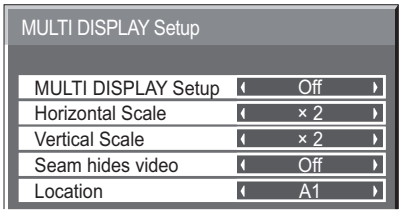
2 Press to select the MULTI DISPLAY Setup.

Press to display the “MULTI DISPLAY Setup” menu.



3 Press to select the MULTI DISPLAY Setup.

Press to select “On” or “Off”.



4 SET UP — Press to exit from Setup.

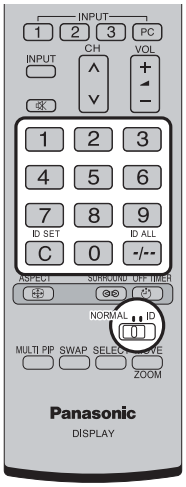
Item	Details
MULTI DISPLAY Setup	Select “On” or “Off”.
Horizontal Scale	Select “× 1”, “× 2”, “× 3”, “× 4”, “× 5”.
Vertical Scale	Select “× 1”, “× 2”, “× 3”, “× 4”, “× 5”.
Seam hides video	Select “On” or “Off”. To hide joints between displays. To show joints between displays. Suitable for moving image display. Suitable for still image display. On Off
Location	Select the required arrangement number. (A1-E5 : Refer to the following) **Display Number locations for each arrangement.** **(Examples)** (2 × 1) (2 × 3) (4 × 2) (4 × 4) (5 × 5)

(2 × 1)		(2 × 3)		(4 × 2)				(4 × 4)				(5 × 5)				
A1	A2	A1	A2	A1	A2	A3	A4	A1	A2	A3	A4	A1	A2	A3	A4	A5
		B1	B2	B1	B2	B3	B4	B1	B2	B3	B4	B1	B2	B3	B4	B5
		C1	C2					C1	C2	C3	C4	C1	C2	C3	C4	C5
								D1	D2	D3	D4	D1	D2	D3	D4	D5
												E1	E2	E3	E4	E5

ID Remote Control Function

You can set the remote control ID when you want to use this remote control on one of several different displays.

Note:
To operate this function, please purchase ID remote controller sold separately.
Object model : EUR7636090R



1 Switch NORMAL ID [0] to NORMAL ID [0] on the right side.

2 Press the ID SET [C] button on the remote control.

3 Press one of [1] - [9], [0] for the tens digit setting.

4 Press one of [1] - [9], [0] for the units digit setting.

Notes:
- The numbers in 2, 3 and 4 should be set up quickly.
- Adjustable ID number range is 0 - 99.
- If a number button is pressed more than two times, the first two numbers become the ID number for the remote control.

ID remote control button operation

The operation is the same as normal remote control except for the CH [^ v] button.

ID Cancellation

Press ID ALL [-/--] button on remote control. (This has the same effect as pressing the ID SET [C], [0], [0] buttons at the same time.)

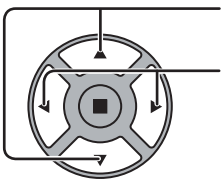
Notes:
- Set the Remote ID “On” to operate the ID remote control.
  If Remote ID is set to “On”, you can use the remote control without identical ID number during option menu display. (see page 42)
- The ID remote control cannot be used when ID select is set to anything other than 0, and the remote control ID is not the same as the ID select number (see page 42).

Setup for Input Signals

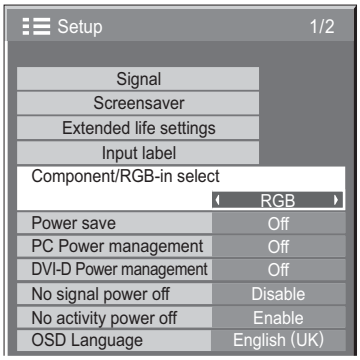
Component / RGB-in select

Select to match the signals from the source connected to the Component / RGB or PC input terminals.
Y, P_B, P_R signals ⇨ “Component”
RGB signals ⇨ “RGB”

1 SET UP — Press to display the Setup menu.

2  Press to select the “Component / RGB-in select”.
Press to select the desired input signal.
Component ⟷ RGB

3 SET UP — Press to exit from adjust mode.

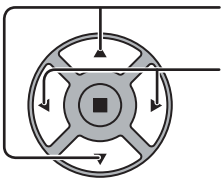


Note:
Make setting of the selected input terminal (COMPONENT/RGB IN or PC IN).

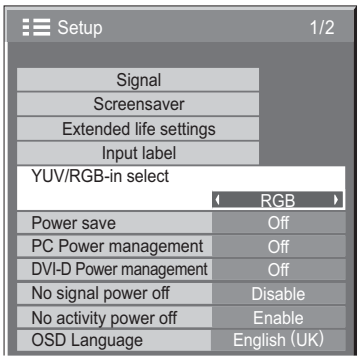
YUV / RGB-in select

Select to match the signals from the source connected to the DVI input terminals.
YUV signals ⇨ “YUV”
RGB signals ⇨ “RGB”

1 SET UP — Press to display the Setup menu.

2  Press to select the “YUV / RGB-in select”.
Press to select the desired mode.
YUV ⟷ RGB

3 SET UP — Press to exit from adjust mode.



Note:
Make setting during DVI-D IN terminal input.

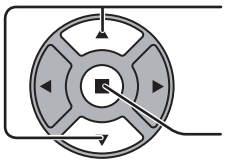
Signal menu

Note:
“Signal” setup menu displays a different setting condition for each input signal.

1 SET UP

Press to display the Setup menu.

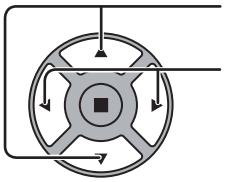
2



Press to select the “Signal”.

Press to display the Signal menu.

3

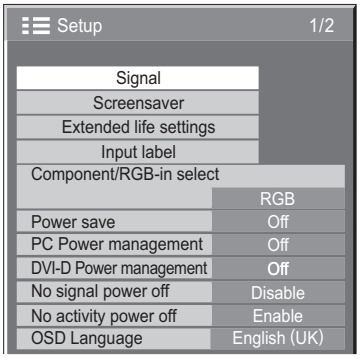


Press to select the menu to adjust.

Press to adjust the menu.

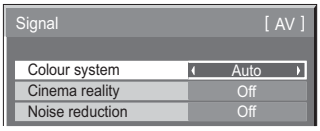
4 SET UP

Press to exit from adjust mode.

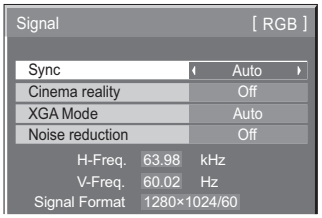


⇩ Press ACTION (■) button

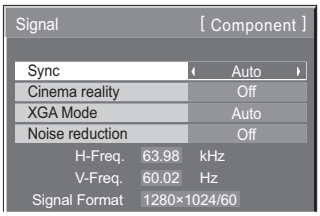
For Video



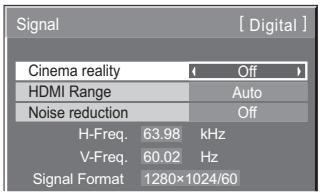
For RGB



For Component

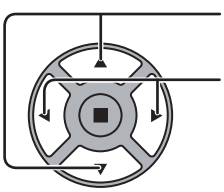


For Digital
(Example: HDMI input)



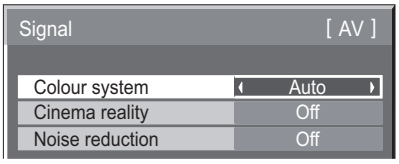
Colour system

Select Signal from the “Setup” menu during Video input signal. (“Signal [AV]” menu is displayed.)



Press to select the “Colour system”.

Press to select each functions.



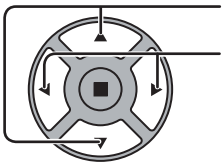
If the picture image becomes unstable:
With the system set on Auto, under conditions of low level or noisy input signals the image may in rare cases become unstable. Should this occur, set the system to match the format of the input signal.

Colour system: Set the colour system to match the input signal. When “Auto” is set, Colour system will be automatically selected from NTSC/PAL/SECAM/M.NTSC.
To display PAL60 signal, select “Auto” or “PAL”.

→ Auto ⟷ PAL ⟷ SECAM ⟷ M.NTSC ⟷ NTSC ←

Cinema reality

Cinema reality:
When on, the display attempts to reproduce a more natural interpretation of sources such as movie pictures, which are recorded at 24 frames per second. If the picture is not stable, turn the setting to off.
Note:
When On, this setting only affects the following signal input:
- NTSC / PAL signal input during “AV” input signal.
- 525i (480i), 625i (575i), 1125 (1080) / 60i signal input during “Component” input signal.

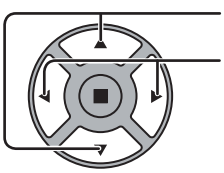


Press to select Cinema reality.

Press to set On / Off.

XGA Mode

This menu is displayed when the input signal is analog (Component/PC). This unit supports three types of XGA signals with 60Hz vertical frequency having different aspect ratios and sampling rates (1,024 × 768 @ 60Hz, 1,280 × 768 @ 60Hz and 1,366 × 768 @ 60Hz).



Press to select “XGA Mode”.

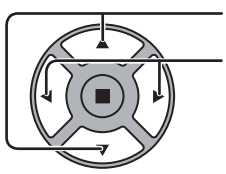
Press to select “Auto”, “1024×768”, “1280×768” , “1366×768”.

Auto: Automatically selected from 1024×768/1280×768/1366×768.
Switch the setting to suit the input signal for better display depends on the angle of view or display resolution condition.

Note:
After making this setting, be sure to make each adjustment (such as “Auto Setup”) on the “Pos./Size” menu as necessary. (see page 21)

Noise reduction

Sets the following three NR (Noise Reduction) functions together.
P-NR, Mosquito NR, Block NR



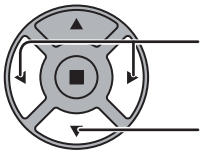
Press to select “Noise reduction”.

Press to select “Off”, “Min” , “Mid” , “Max” , “Advanced”.

Advanced NR

Sets the three NR functions separately.

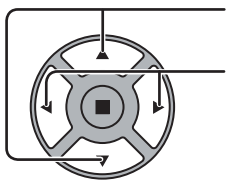
1



Press to select “Advanced”.

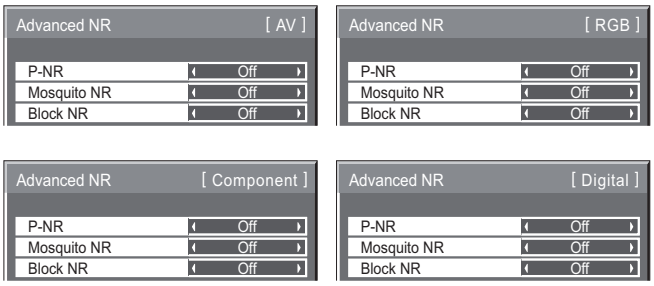
Press to enter Advanced NR.

2



Press to select P-NR, Mosquito NR or Block NR.

Press to select “Off”, “Min”, “Mid”, “Max”.

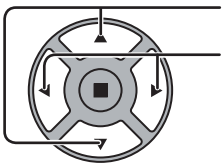


P-NR: Automatically reduces unwanted picture noise.
Mosquito NR: Reduces mosquito noise around subtitles on MPEG videos.
Block NR: Reduces block noise when playing MPEG videos.

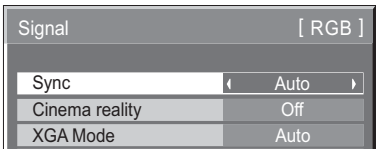
Note:
Noise reduction cannot be adjusted while a PC signal is being applied.

Sync

This function operates only during input from PC IN terminal.
Select Signal from the “Setup” menu during RGB or Component input signal.



Press to select the “Sync”.
Press to adjust.



Setting RGB sync signal

Confirm that the input is set to RGB input (this setting is valid only for RGB input signal).

Auto: The H and V sync or synchronized signal is automatically selected. If both input, it is selected the H and V sync.
↕
on G: Uses a synchronized signal on the Video G signal, which is input from the G connector.

Setting Component sync signal

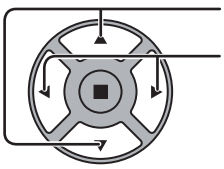
Confirm that the input is set to Component input (this setting is valid only for Component input signal).

Auto: The H and V sync or synchronized signal is automatically selected. If both input, it is selected the H and V sync.
↕
on Y: Uses a synchronized signal on the Video Y signal, which is input from the Y connector.

Note:
Signals input to COMPONENT/RGB IN terminals correspond to Sync on G or Sync on Y.

HDMI Range

Switches the dynamic range according to the input signal from HDMI terminal.



Press to select the “HDMI Range”.
Press to select “Video(16-235)”, “Full(0-255)”, “Auto”.

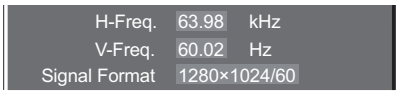
Video(16-235): If the input signal is the video range, Example: HDMI terminal output for DVD player
Full(0-255): If the input signal is full range, Example: HDMI terminal output for personal computer
Auto: Switches the dynamic range automatically between “Video(16-235)” and “Full(0-255)” according to the input signal.

Note:
This function can be set only for HDMI terminal input.

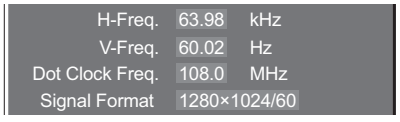
Input signal display

Displays the frequency and the type of the current input signal.

This display is valid only for Component / RGB / PC and Digital input signal.
Display range:
Horizontal 15 - 110 kHz
Vertical 48 - 120 Hz



The dot clock frequency is displayed during DVI signal input.



Options Adjustments

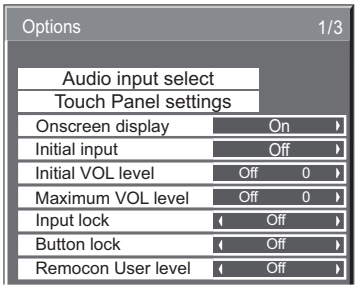
1 SET UP — Press to display the Setup menu.

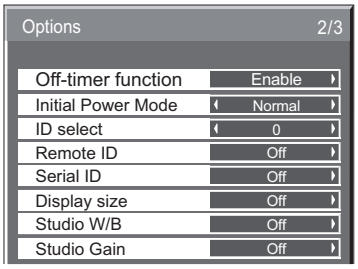
2 Press to select “OSD Language”.
Press for more than 3 seconds.

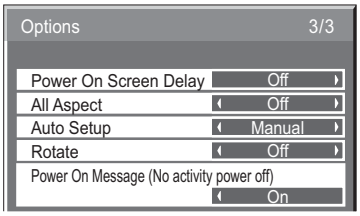
3 Press to select “Options”.
Press to display the Options menu.

4 Press to select your preferred menu.
Press to adjust the menu.

5 SET UP — Press to exit from Options menu.







Item	Adjustments
Audio input select	Set up the sound when an image input is selected. (see page 44)
Touch Panel settings	Set while using Touch Panel (available as an option). (see page 44)
Onscreen display	**On:** Displays all the following on screen. • Power on display • Input signal switch display • No signal display • Mute and the remaining time of off-timer after RECALL was pressed. **Off:** Hides all the items above from view.
Initial input	Adjusts the input signal when the unit is turned on. **Off** ↔ **PC** ↔ **VIDEO** ↔ **COMPONENT*** ↔ **HDMI** ↔ **DVI** * “COMPONENT” may be displayed as “RGB” depending on the setting of “Component/RGB-in select”. (see page 36) **Notes:** • Only the adjusted signal is displayed. (see page 15) • This menu is available only when “Input lock” is “Off”.
Initial VOL level	Press VOL − + button to adjust the volume when the unit is turned on. **Off** ⟷ **On** **Off:** Sets normal volume. **On:** Sets your preferred volume. **Notes:** • When “Maximum VOL level” is “On”, the volume can only be adjusted between 0 and your maximum range. • You can hear the changed volume regardless of your volume setting before opening the options menu if you adjust the volume when “Initial VOL level” is “On” and cursor is on the menu.
Maximum VOL level	Press VOL − + button to adjust the maximum volume. **Off** ⟷ **On** **Off:** Sets auto maximum volume. **On:** Sets your preferred maximum volume. **Notes:** • If the “Maximum VOL level” is set lower than the “Initial VOL level”, the “Initial VOL level” automatically becomes the same as the “Maximum VOL level”. • The volume display can go up to 63 regardless of the settings. • You can hear the changed volume regardless of your volume setting before opening the options menu if you adjust the volume when “Maximum VOL level” is “On” and cursor is on the menu.

Item	Adjustments
Input lock	Locks the input switch operation. **Off** ⟷ **PC** ⟷ **VIDEO** ⟷ **COMPONENT*** ⟷ **HDMI** ⟷ **DVI** * "COMPONENT" may be displayed as "RGB" depending on the setting of "Component/RGB-in select". (see page 36) **Notes:** • Only the adjusted signal is displayed (see page 15). • Input switch can be used when this is set to "Off".
Button lock	**Off** ⟷ **MENU&ENTER** ⟷ **On** **Off:** All the buttons on main unit can be used. **MENU&ENTER:** Locks MENU and ENTER/■ buttons on main unit. **On:** Locks all the button on main unit. Sets Button lock with the unit buttons in the following procedure. **Off:** Press four times→Press four times→Press four times→Press **MENU&ENTER:** Press four times→Press four times→Press four times→Press **On:** Press four times→Press four times→Press four times→Press
Remocon User level	**Off** ⟷ **User1** ⟷ **User2** ⟷ **User3** **Off:** You can use all of the buttons on the remote control. **User1**: You can only use , INPUT, RECALL, MUTE, VOL buttons on the remote control. **User2**: You can only use button on the remote control. **User3:** Locks all the buttons on remote control.
Off-timer function	**Enable:** Enables the "Off-timer function". **Disable:** Disables the "Off-timer function". **Note:** When "Disable" is set, the Off-timer is cancelled.
Initial Power Mode	**Normal** ⟷ **Standby** ⟷ **On** Sets the power mode of the unit for when the power recovers from failure or after plugging off and in again. **Normal:** Power returns in as the same state as before the power interruption. **Standby:** Power returns in standby mode. (Power Indicator : red/orange) **On:** Power returns in power On. (Power Indicator : green) **Note:** When using multiple displays, "Standby" is preferred to be set in order to reduce a power load.
ID select	Sets panel ID number when panel is used in "Remote ID" or "Serial ID". Set value range: 0 - 100 (Standard value: 0)
Remote ID	The setting of this menu is valid only when using ID remote control. **Off:** Disables ID remote control functions. You can use normal remote control operations. **On:** Enable ID remote control functions. **Note:** To use the ID remote control function, it is necessary to set each ID number of remote control and display unit. About the setting method, please refer to "ID Remote Control Function" (see page 35) and "ID select" (above-mentioned).
Serial ID	Sets the panel ID Control. **Off:** Disables external control by the ID. **On:** Enables the external control by the ID.
Display size	Adjusts the image display size on screen. **Off:** Sets the normal image display size on screen. **On:** Sets the image display size approximately 95 % of the normal image display. **Off** **On** **Notes:** • This setting is valid only when the input signals are as follows; NTSC, PAL, SECAM, M.NTSC, PAL60, PAL-M, PAL-N (Video) 525i, 525p, 625i, 625p, 750/60p, 750/50p, 1125/60i, 1125/50i, 1125/24sF, 1125/25p, 1125/24p, 1125/30p, 1125/60p, 1125/50p (Component Video, RGB, DVI, HDMI) • This setting is invalid when digital zoom or Multi display is selected. • When "Display size" is set to "On", "H-Pos" and "V-Pos" in "Pos./Size" can be adjusted.

Item	Adjustments
Studio W/B	**Off:** Nullify all the settings adjusted. **On:** Sets the colour temperature for TV studio. **Note:** Valid only when the “Warm” is set as “White balance” in Picture menu.
Studio Gain	Sharpens the contrast for a better view when a part of the image is too light to see. **Off:** Disables “Studio Gain”. **On:** Enables “Studio Gain”. **Note:** This setting is valid only when the input signals are as follows: Component Video, RGB (analog), HDMI
Power On Screen Delay	**Off** ↔ **1** ↔ **2** ↔ **3....** ↔ **30** You can set the power-on delay time of the displays to reduce the power load, when you press ⏻/| to turn on the multiple displays that are set together, for example, on MULTI DISPLAY system. Set each display’s setting individually. **Off:** The display will be turned on at the same time as ⏻/| is pressed. **1 to 30 (sec.):** Set the power-on delay time (second). After pressing ⏻/|, the display will be powered on with time delay depending on this setting. **Notes:** • During this function is working, the power indicator is blinking green. • This function also works when the power recovers from failure or after plugging off and in again the power cord.
All Aspect	Sets All Aspect mode (advanced aspect setting) or default aspect mode. With each press of ASPECT button, the aspect changes in the selected mode. **Off:** Default aspect mode **On:** All Aspect mode Aspect mode of each setting is as follows: (Example: HD signal) **Off** 4:3→4:3 Full→Zoom1→Zoom2→Zoom3→16:9→14:9→Just **On** 4:3 (1)→4:3 (2)→4:3 Full→Zoom1→Zoom2→Zoom3→16:9→14:9→Just1→Just2
Auto Setup	Sets the operational mode of the automatic position adjustment in the Pos./Size menu. **Manual:** Automatic position adjustment starts when AUTO SETUP is pressed on the remote control or automatic position adjustment is executed from the Pos./Size menu. **Auto**: Other than remote control or menu operation, automatic position adjustment starts: When the display power is turned ON. When the input signal is switched.
Rotate	**Off:** Does not rotate the image. **On:** Rotates the image 180 degrees.
Power On Message (No activity power off)	Whether to show/hide No activity power off Precautions at the time of power ON is set. **On:** The warning precautions are shown at the time of power ON. **Off:** The warning precautions are not shown at the time of power ON. **Note:** This setting is enabled only if “No activity power off” is “Enable”.

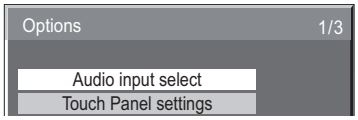
Normalization

When both main unit buttons and remote control are disabled due to the “Button lock”, “Remocon User level” or “Remote ID” adjustments, set all the values “Off” so that all the buttons are enabled again.

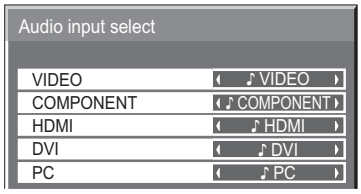
Press the −/▼ VOL button on main unit together with R button on the remote control and hold for more than 5 seconds. The “Shipping” menu is displayed and the lock is released when it disappears.

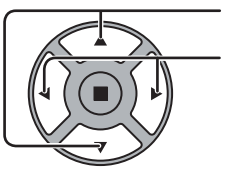
Audio input select

Set up the sound when an image input is selected.



⇩ Press ACTION (■) button





Press to select image input.

Press to select audio input.

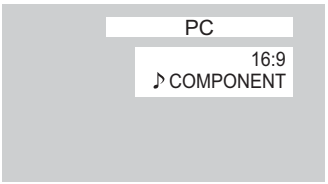
Image input	Audio input
[VIDEO]	VIDEO / COMPONENT / DVI / PC / NO AUDIO
[COMPONENT]*	VIDEO / COMPONENT / DVI / PC / NO AUDIO
[HDMI]	VIDEO / COMPONENT / HDMI / DVI / PC / NO AUDIO
[DVI]	VIDEO / COMPONENT / DVI / PC / NO AUDIO
[PC]	VIDEO / COMPONENT / DVI / PC / NO AUDIO

NO AUDIO: No audio input (Mute)

* “COMPONENT”may be displayed as “RGB” depending on the setting of “Component/RGB-in select”. (see page 36)

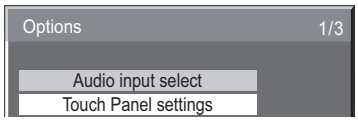
Note:
HDMI Audio is selectable only for HDMI Input.

When Image input and Audio input differ from each other, the Audio input is displayed as below.



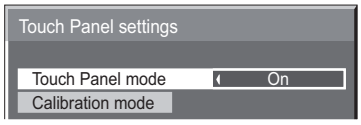
Touch Panel settings (Settings when using Touch Panel)

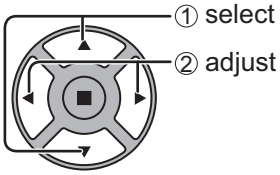
The mode to restrict NANODRIFT Saver (see page 29) operation when using Touch Panel (available as an option) is set up.



⇩ Press ACTION (■) button

Set “Touch Panel mode” to “On”.

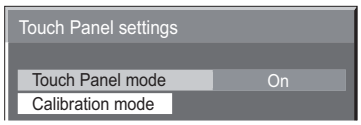


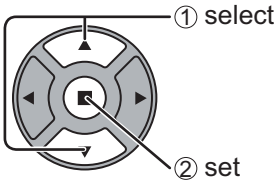


NANODRIFT Saver in Touch Panel mode: On
The value set for NANODRIFT turns into “On” and displayed in gray.
The moving distance of NANODRIFT is limited to 3 × 3 dots to prevent pointer drift on a touch panel.

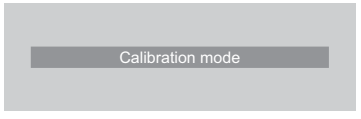
Calibration mode
This setting is used in calibrating a touch panel.
You can configure the setting if “Touch Panel mode” is “On”.

Select “Calibration mode” and then press ■.





When the menu is not displayed (normal screen)
Hold down N for over 3 seconds.



The screen is displayed in the middle and NANODRIFT is deactivated for 180 seconds. After 180 seconds or when you have the menu displayed with a remote control, Calibration mode is cancelled.

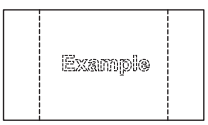
Note:
For information on how to set up Calibration, please see Touch Panel instruction manual.

Troubleshooting

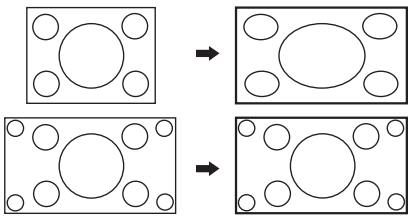
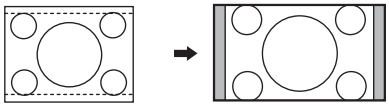
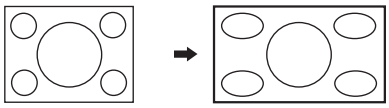
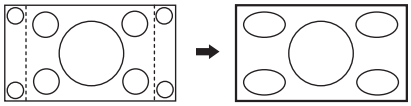
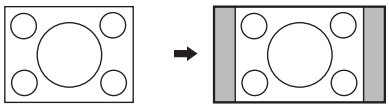
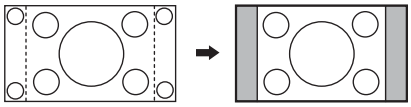
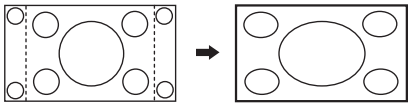
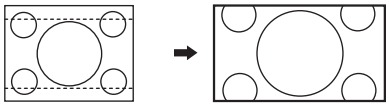
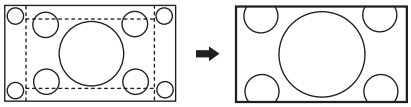
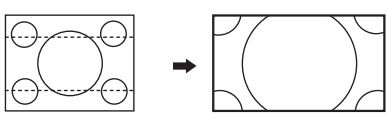
Before you call for service, determine the symptoms and make a few simple checks as shown below.

Symptoms		Checks
Picture	**Sound**	
Interference	Noisy Sound	Electrical Appliances Cars / Motorcycles Fluorescent light
Normal Picture	No Sound	Volume (Check whether the mute function has been activated on the remote control.)
No Picture	No Sound	Not plugged into AC outlet Not switched on Picture and Brightness/Volume setting (Check by pressing the power switch or stand-by button on the remote control.)
No Picture	Normal Sound	If a signal with a non-applicable colour system format, or frequency is input, only the input terminal indication is displayed.
No Colour	Normal Sound	Colour controls set at minimum level (see page 23, 24) Colour system (see page 38)
No remote control operations can be performed.		Check whether the batteries have discharged completely and, if they have not, whether they were inserted properly. Check whether the remote control sensor is exposed to an outdoor light or a strong fluorescent light. Check whether the remote control designed specifically for use with the unit is being used. (The unit cannot be operated by any other remote control.)
A cracking sound is sometimes heard from the unit.		If there is nothing wrong with the picture or sound, this is the sound of the cabinet undergoing very slight contractions in response to changes in the room temperature. There are no adverse effects on the performance or other aspects.
The top or bottom of the picture on the screen is cut off when I use the zoom function.		Adjust the position of the picture on the screen.
Areas at the top and bottom of the screen where the image is missing appear when I use the zoom function.		When using a video software program (such as a cinema size program) with a screen wider than one in the 16:9 mode, blank areas separate from the images are formed at the top and bottom of the screen.
I can hear sounds coming from inside the unit.		When the power is turned on, a sound of the display panel being driven may be heard: This is normal and not indicative of malfunctioning.
Parts of the unit become hot.		Even when the temperature of parts of the front, top and rear panels has risen, these temperature rises will not pose any problems in terms of performance or quality.
Power automatically turns off unexpectedly.		Check the settings of “PC Power management”, “DVI-D Power management”, “No signal power off” and “No activity power off” in the Setup menu. Any of them may be set to “On (Enable)”. (see page 31)
Power indicator is blinking in red.		There is possibility of malfunction. Please contact an Authorized Service Center.
This Plasma Display uses special image processing. Hence a slight time lag may occur between image and audio, depending on the type of input signal. However, this is not a malfunction.		

Plasma Display panel

Symptoms	Check
The screen darkens slightly when bright pictures with minimal movements are shown.	The screen will darken slightly when photos, still images of a computer or other pictures with minimal movements are shown for an extended period. This is done to reduce image retention on the screen and the shortening of the screen’s service life: It is normal and not indicative of malfunctioning.
It takes a while for the picture to appear.	The unit digitally processes the various signals in order to reproduce esthetically pleasing images. As such, it sometimes takes a few moments for the picture to appear when the power has been turned on, when the input has been switched.
The edges of the images flicker.	Due to the characteristics of the system used to drive the panel, the edges may appear to flicker in the fast-moving parts of the images: This is normal and not indicative of malfunctioning.
The brightness on both sides of images in the 4:3 mode changes.	When viewing the side panels at the “High” or “Mid” setting, the brightness on both sides may change depending on the kind of program shown: This is normal and not indicative of malfunctioning.
Some parts of the screen do not light up.	The plasma display panel is manufactured using an extremely high level of precision technology, however, sometimes some parts of the screen may be missing picture elements or have luminous spots. This is not a malfunction.
 Image retention appears	Do not allow a still picture to be displayed for an extended period, as this can cause a permanent image retention to remain on the Plasma Display. Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode. **Note:** The permanent image retention on the Plasma Display resulting from fixed image use is not an operating defect and as such is not covered by the Warranty. This product is not designed to display fixed images for extended periods of time.
Whirring sounds can be heard from the display unit.	The display unit is fitted with a cooling fan to dissipate heat generated during normal use. The whirring sound is caused by rotation of the fan and is not a malfunction.

List of Aspect Modes

Aspect mode		Picture ➡ Enlarged screen	Description
All Aspect: On	Factory setting All Aspect: Off		
16:9	16:9		The display of the pictures fills the screen. In the case of SD signals, pictures with a 4:3 aspect ratio are enlarged horizontally, and displayed. This mode is suited to displaying anamorphic pictures with a 16:9 aspect ratio.
14:9	14:9		Letterbox pictures with a 14:9 aspect ratio are enlarged vertically and horizontally so that their display fills the screen vertically and is slightly smaller than the screen horizontally. The top and bottom edges of the pictures are cut off. Side panels are displayed at the left and right edges of the screen.
Just Just1	Just		Pictures with a 4:3 aspect ratio are enlarged horizontally so that the picture distortion is minimized. The display of the areas around the left and right edges of the screen is slightly elongated.
Just2	–		The pictures with a 4:3 aspect ratio among the 16:9 aspect ratio signals are enlarged horizontally so that the picture distortion is minimized. The left and right edges of the pictures are cut off. The display of the areas around the left and right edges of the screen is slightly elongated.
4:3 4:3 (1)	4:3		Pictures with a 4:3 aspect ratio are displayed with their original aspect ratio. Side panels are displayed at the left and right edges of the screen.
4:3 (2)	–		The pictures with a 4:3 aspect ratio among the 16:9 aspect ratio signals are displayed with their original aspect ratio. The left and right edges of the pictures are masked with side panels.
4:3 Full	4:3 Full		The pictures with a 4:3 aspect ratio among the 16:9 aspect ratio signals are enlarged horizontally so that their display fills the screen. The left and right edges of the pictures are cut off.
Zoom Zoom1	Zoom1		Letterbox pictures with a 16:9 aspect ratio are enlarged vertically and horizontally so that their display fills the screen. The top and bottom edges of the pictures are cut off.
Zoom2	Zoom2		The letterbox pictures with a 2.35:1 aspect ratio among the 16:9 aspect ratio signals are enlarged vertically and horizontally so that their display fills the screen. The top and bottom edges as well as the left and right edges of the pictures are cut off.
Zoom3	Zoom3		Letterbox pictures with a 2.35:1 aspect ratio are enlarged vertically and horizontally so that their display fills the screen vertically and is slightly larger than the screen horizontally. The top and bottom edges as well as the left and right edges of the pictures are cut off.

Applicable input signals

*Mark: Applicable input signal

	Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)	COMPONENT / RGB IN / PC IN (Dot clock (MHz))	DVI-D IN (Dot clock (MHz))	HDMI
1	525 (480) / 60i	15.73	59.94	* (13.5)	* (27.0)	*
2	525 (480) / 60p	31.47	59.94	* (27.0) *4	* (27.0)	*
3	625 (575) / 50i	15.63	50.00	* (13.5)		
4	625 (576) / 50i	15.63	50.00		* (27.0)	*
5	625 (575) / 50p	31.25	50.00	* (27.0)		
6	625 (576) / 50p	31.25	50.00		* (27.0)	*
7	750 (720) / 60p	45.00	60.00	* (74.25)	* (74.25)	*
8	750 (720) / 50p	37.50	50.00	* (74.25)	* (74.25)	*
9	1,125 (1,080) / 60p	67.50	60.00	* (148.5) *1	* (148.5)	*
10	1,125 (1,080) / 60i	33.75	60.00	* (74.25) *1	* (74.25)	*
11	1,125 (1,080) / 50p	56.26	50.00	* (148.5) *1	* (148.5)	*
12	1,125 (1,080) / 50i	28.13	50.00	* (74.25) *1	* (74.25)	*
13	1,125 (1,080) / 24sF	27.00	48.00	* (74.25) *2		
14	1,125 (1,080) / 30p	33.75	30.00	* (74.25) *1	* (74.25)	
15	1,125 (1,080) / 25p	28.13	25.00	* (74.25) *1	* (74.25)	
16	1,125 (1,080) / 24p	27.00	24.00	* (74.25) *1	* (74.25)	*
17	640 × 400 @70 Hz	31.46	70.07	* (25.17)		
18	640 × 480 @60 Hz	31.47	59.94	* (25.18) *5	* (25.18)	*
19	640 × 480 @72 Hz	37.86	72.81	* (31.5)		
20	640 × 480 @75 Hz	37.50	75.00	* (31.5)		
21	640 × 480 @85 Hz	43.27	85.01	* (36.0)		
22	800 × 600 @56 Hz	35.16	56.25	* (36.0)		
23	800 × 600 @60 Hz	37.88	60.32	* (40.0)	* (40.0)	*
24	800 × 600 @72 Hz	48.08	72.19	* (50.0)		
25	800 × 600 @75 Hz	46.88	75.00	* (49.5)		
26	800 × 600 @85 Hz	53.67	85.06	* (56.25)		
27	852 × 480 @60 Hz	31.47	59.94	* (33.54) *5	* (34.24)	*
28	1,024 × 768 @50 Hz	39.55	50.00		* (51.89)	*
29	1,024 × 768 @60 Hz	48.36	60.00	* (65.0)	* (65.0)	*
30	1,024 × 768 @70 Hz	56.48	70.07	* (75.0)		
31	1,024 × 768 @75 Hz	60.02	75.03	* (78.75)		
32	1,024 × 768 @85 Hz	68.68	85.00	* (94.5)		
33	1,066 × 600 @60 Hz	37.64	59.94	* (53.0)	* (53.0)	*
34	1,152 × 864 @60 Hz	53.70	60.00		* (81.62)	*
35	1,152 × 864 @75 Hz	67.50	75.00	* (108.0)		
36	1,280 × 768 @60 Hz	47.70	60.00	* (80.14)		
37	1,280 × 960 @60 Hz	60.00	60.00	* (108.0)		
38	1,280 × 960 @85 Hz	85.94	85.00	* (148.5)		
39	1,280 × 1,024 @60 Hz	63.98	60.02	* (108.0)	* (108.0)	*
40	1,280 × 1,024 @75 Hz	79.98	75.03	* (135.0)		
41	1,280 × 1,024 @85 Hz	91.15	85.02	* (157.5)		
42	1,366 × 768 @50 Hz	39.55	50.00		* (69.92)	*
43	1,366 × 768 @60 Hz	48.36	60.00	* (86.71)	* (87.44)	*
44	1,400 × 1,050 @60 Hz	65.22	60.00		* (122.61)	*
45	1,600 × 1,200 @60 Hz	75.00	60.00	* (162.0)	* (162.0)	*
46	1,600 × 1,200 @65 Hz	81.25	65.00	* (175.5)		
47	1,920 × 1,080 @60 Hz	67.50	60.00	* (148.5) *3	* (148.5)	*
48	1,920 × 1,200 @60 Hz	74.04	59.95		* (154.0)	*
49	Macintosh13" (640 × 480)	35.00	66.67	* (30.24)		
50	Macintosh16" (832 × 624)	49.72	74.54	* (57.28)		
51	Macintosh21" (1,152 × 870)	68.68	75.06	* (100.0)		

*1: Based on SMPTE 274M standard.
*2: Based on SMPTE RP211 standard.
*3: The input signal is recognized as 1,125 (1,080) / 60p.
*4: When selected the RGB format and 525p signal input to the PC IN terminal, it is recognized as VGA 60Hz signal.
*5: When inputted VGA 60Hz format signal from the other than PC IN terminal, it is recognized as 525p signal.
Note: Signals without above specification may not be displayed properly.

Video input (VIDEO)

	Signal name	Horizontal frequency(kHz)	Vertical frequency(Hz)
1	NTSC	15.73	59.94
2	PAL	15.63	50.00
3	PAL60	15.73	59.94
4	SECAM	15.63	50.00
5	Modified NTSC	15.73	59.94

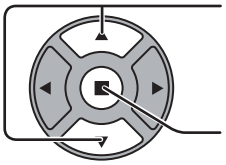
Shipping condition

This function allows you to reset the unit to the factory setting.

1 SET UP

Press to display the Setup menu.

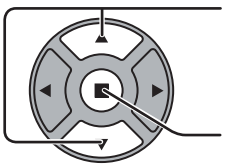
2



Press to select “OSD Language”.

Press for more than 3 seconds.

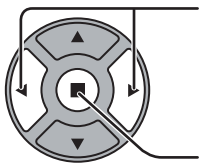
3



Press to select “Shipping”.

Press to display the Shipping menu.

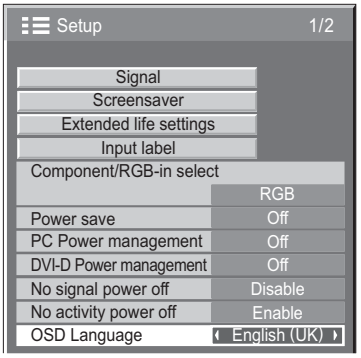
4



Press to select “YES”.

Press to confirm.

5 Wait for 10 seconds, and then turn the power off.



[from the unit]
1 Press the MENU button till the Setup menu is displayed.
2 Press the Volume Up“+” or Down“–” button to select “OSD Language”.
3 Press and hold the ENTER button till the Shipping menu is displayed.
4 Press the Volume Up“+” or Down“–” button to select “YES”.
5 Press the ENTER button and wait for 10 sec.
6 Turn the power off.

Specifications

			TH-50PH30E	
Power Source			220 - 240 V AC, 50/60 Hz	
Power Consumption				
	Power on		230 W	
	Stand-by condition		0.5 W	
	Power off condition		0.3 W	
Plasma Display panel			Drive method : AC type 50-inch, 16:9 aspect ratio	
Screen size			1,105 mm (W) × 622 mm (H) × 1,268 mm (diagonal)	
	(No.of pixels)		786,432 (1,024 (W) × 768 (H)) [3,072 × 768 dots]	
Operating condition				
	Temperature		0 °C - 40 °C	
	Humidity		20 % - 80 %	
Applicable signals				
	Colour System		NTSC, PAL, PAL60, SECAM, Modified NTSC	
	Scanning format		525 (480) / 60i · 60p, 625 (575) / 50i · 50p, 750 (720) / 60p · 50p, 1125 (1080) / 60i · 60p · 50i · 50p · 24p · 25p · 30p · 24sF	
	PC signals		VGA, SVGA, XGA SXGA, UXGA ···· (compressed) Horizontal scanning frequency 15 - 110 kHz Vertical scanning frequency 48 - 120 Hz	
Connection terminals				
	AV IN	VIDEO	BNC	1.0 Vp-p (75 Ω)
		AUDIO L-R	RCA Pin jack × 2	0.5 Vrms
		HDMI	TYPE A Connector	
	COMPONENT/RGB IN			
		Y/G	BNC	with sync 1.0 Vp-p (75 Ω)
		PB/CB/B	BNC	0.7 Vp-p (75 Ω)
		PR/CR/R	BNC	0.7 Vp-p (75 Ω)
		AUDIO L-R	RCA Pin jack × 2	0.5 Vrms
	DVI-D IN		DVI-D 24 Pin	Compliance with DVI Revision 1.0
			Content Protection	Compatible with HDCP 1.1
		AUDIO	Stereo mini jack (M3) × 1	0.5 Vrms
	PC IN		High-Density Mini D-sub 15 Pin	Y or G with sync 1.0 Vp-p (75 Ω) Y or G without sync 0.7 Vp-p (75 Ω) PB/CB/B: 0.7 Vp-p (75 Ω) PR/CR/R: 0.7 Vp-p (75 Ω) HD/VD: 1.0 - 5.0 Vp-p (high impedance)
		AUDIO	Stereo mini jack (M3) × 1	0.5 Vrms
	SERIAL		External Control Terminal D-sub 9 Pin	RS-232C compatible
	EXT SP		Speaker Terminal	6 Ω, 16 W [8 W + 8 W] (10 % THD)
Dimensions (W × H × D)			1,210 mm × 724 mm × 89 mm	
Mass (weight)				
	main unit only		approx. 31.0 kg net	
	with speakers		approx. 36.0 kg	

Notes:

- Design and specifications are subject to change without notice. Mass and dimensions shown are approximate.
- This equipment complies with the EMC standards listed below.
  EN55022, EN55024, EN61000-3-2, EN61000-3-3.

Information for Users on Collection and Disposal of Old Equipment and used Batteries

These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[Information on Disposal in other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Customer's Record

The model number and serial number of this product can be found on its rear panel. You should note this serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number _____ Serial Number _____

Panasonic Corporation

Web Site : http://panasonic.net

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